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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission: 157

Application Number	09/718,312
Filing Date	November 22, 2000
First Named Inventor	Walter F. Rausch
Art Unit	2685
Examiner Name	Duc M. Nguyen
Attorney Docket Number	1437

ENCLOSURES ***(check all that apply)***

- ☒ Fee Transmittal Form
  - ☐ Fee Attached
- ☐ Amendment / Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
- ☐ Express Abandonment Request
- ☐ Information Disclosure Statement
- ☐ Certified Copy of Priority Document(s)
- ☐ Reply to Missing Parts/ Incomplete Application
  - ☐ Reply to Missing Parts under 37 CFR1.52 or 1.53
- ☐ Drawing(s)
- ☐ Licensing-related Papers
- ☐ Petition
- ☐ Petition to Convert to a Provisional Application
- ☐ Power of Attorney, Revocation Change of Correspondence Address
- ☐ Terminal Disclaimer
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- ☐ After Allowance Communication to TC
- ☐ Appeal Communication to Board of Appeals and Interferences
- ☒ Appeal Communication to TC **(Appeal Notice, Brief, Reply Brief)**
- ☐ Proprietary Information
- ☐ Status Letter
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Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm	Lathrop & Gage L.C.		
Signature	James M Stipek		
Printed Name	James M. Stipek		
Date	May 31, 2005	Reg. No.	39,388

CERTIFICATE OF MAILING 37 CFR 1.10

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Typed or printed name	Melissa Smith	Date	May 31, 2005

PTO/SB/17 (12-04v2)
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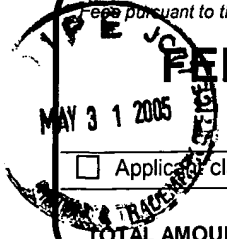

FEE TRANSMITTAL for FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT	($) 500.00

Complete if Known	
Application Number	09/718,312
Filing Date	November 22, 2000
First Named Inventor	Walter F. Rausch
Examiner Name	Duc M. Nguyen
Art Unit	2685
Attorney Docket No.	~~382406~~ 1437

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify) : _____

☒ Deposit Account Deposit Account Number: 21-0765 Deposit Account Name: Sprint Communications Company L.P.

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

	FILING FEES		SEARCH FEES		EXAMINATION FEES		
		Small Entity		Small Entity		Small Entity	
Application Type	Fee ($)	Fee($)	Fee($)	Fee($)	Fee($)	Fee($)	Fees Paid ($)
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee ($)	Small Entity Fee ($)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 30 (including Reissues)	200	100
Multiple dependent claims	360	180

Total Claims		Extra Claims		Fee($)		Fee Paid ($)
_____	-31 or HP=	_____	x	_____	=	_____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims		Extra Claims		Fee($)		Fee Paid ($)
_____	- 3 or HP=	_____	x	_____	=	_____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims	
Fee ($)	Fee Paid ($)
_____	_____

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets		Extra Sheets		Number of each additional 50 or fraction thereof		Fee ($)	Fee Paid ($)
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4. OTHER FEE(S)

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Non-English Specification, $130 fee (no small entity discount)	_____
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SUBMITTED BY

Signature	James M Stipek	Registration No. (Attorney/Agent)	39,388	Telephone	(816) 460-5848
Name (Print/Type)	James M. Stipek			Date	May 31, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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PATENT
Attorney Docket No. 1437
Express Mail Label No. EV 413217917 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant(s)	Rausch et al.	Examiner	Nguyen, Duc M.
Serial No.	09/718,312	Group Art No.	2685
Filed	November 22, 2000	Confirmation No.	3505
For	System and Method for Processing a Signal		

May 31, 2005

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Appeal Brief
37 C.F.R. § 41.37

This appeal was due with a one month extension on May 28, 2005, which fell on a Saturday. The following Monday, which was May 30, 2005, was Memorial Day. Therefore, this Appeal Brief is filed timely with a one month extension.

06/02/2005 MAHMED1 00000020 210765 09718312
01 FC:1402 500.00 DA

CERTIFICATE UNDER 37 C.F.R. § 1.8 and § 1.10

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Melissa Smith	Melissa Smith	May 31, 2005
Name of Depositor/Transmitter	Signature	Date

Table of Contents

I. Real Party in Interest

The real party in interest for this appeal is Sprint Communications Company, L.P., a limited partnership duly organized and existing under the laws of the State of Delaware, and having a principal place of business at 6391 Sprint Parkway, Overland Park, KS 66251-2100.

II. Related Appeals and Interferences

No other appeals or interferences currently are known to Appellant that are related to, will directly affect or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

III. Status of Claims

Claims 1-6, 8-62, and 64-68 are pending, stand rejected, and are being appealed. Claims 7 and 63 were canceled and are not being appealed.

IV. Status of Amendments

Claims 1, 8, 10, 11, 14, 24, 25, 35, 41, 45, 57, 64, 66, 67, and 68 were amended. The amendments were entered. Claims 7 and 63 were cancelled.

A First Office action was mailed on June 9, 2003, to which a Response amending claims 1, 8, 10, 11, 14, 24, 25, 35, 41, 45, 57, 64, 66, 67, and 68 and canceling claims 7 and 63 was filed on September 9, 2003. A Second Office action was mailed on February 10, 2004, to which a Response was filed on June 10, 2004. A Third Office action was mailed on August 10, 2004, to which a Response was filed on October 12, 2004. A Fourth Office action was mailed on November 30, 2004, to which a Response to Provoke Advisory Action was filed on January 31, 2005. A notice of appeal was filed February 28, 2005. An Advisory Action was mailed March 14, 2005. The only amendment to the claims was made in the First Office action Response filed on September 9, 2003.

V. Summary of Claimed Subject Matter

The claims are directed to systems and methods for receiving communication signals. The following text is from the specification at page 7, lines 6-16.

> Figure 1 illustrates an exemplary embodiment of a wireless communication system of the present invention. The wireless communication system 102 receives communication signals at a tower, converts the communication signals to optical signals, and transmits the optical signals to a receiving location. . . . The wireless communication system 102 of Figure 1 has a wireless receiving system (WRS) 104, a

main converting system (MCS) 106, a redundant converting system (RCS) 108, a stabilizing system 110, and an optical receiving system (ORS) 112.

The following text is from the specification at page 7, lines 1-11, and also refers to Figure 1.

The stabilizing system 110 stabilizes the MCS 106 and the RCS 108 with a stable timing signal, such as a GPS timing signal, so that the MCS and the RCS can convert the communication signals to a lower intermediate frequency. Each of the MCS 106 and the RCS 108 have a local oscillator that is subject to drift, thereby introducing unstable drift to the communication signal. The stable timing signal is a stable signal that, when input into the local oscillator, operates to correct the drift of the local oscillator so that the local oscillator has a stable output that does not deviate from its desired frequency. The stabilizing system 110 also distributes electrical power to the MCS 106 and the RCS 108.

The following text is from the specification at page 10, lines 7-11.

Figure 2 illustrates an exemplary embodiment of an expanded wireless communication system of the present invention. The wireless communication system 102A of Figure 2 comprises . . . a main signal converting system 206, a redundant signal converting system 208, an optical receiving system 210, and a stabilizing system 212.

The following text is from the specification at page 13, lines 12-24.

The stabilization system 212 stabilizes the local oscillator that provides an input to the LNBs 218 and 220, preferably with a stable timing signal, such as a GPS timing signal. . . . The stabilization system 212 comprises a timing source 230 . . . and a stabilized local oscillator 238. . . .

The timing source 230 generates a stable timing signal, such as a GPS based timing signal. The GPS timing signal has a timing component that is very accurate. This timing component is based on timing from atomic clocks in the GPS satellites that are synchronized so that the timing can be used for precise measurements. It is this timing component that is used for the GPS timing signal.

The following text is from the specification at page 15, line 17-page 16, line 6.

The stabilized local oscillator 238 generates a stabilized oscillator signal as its output. The stabilized local oscillator 238 transmits the stabilized oscillator signal to the LNBs 218 and 220.

The stabilized oscillator signal is stabilized by a stable timing signal, such as a GPS timing signal, generated from the timing source 230. This GPS timing signal is received as an input into the stabilized local oscillator 238 and enables the stabilized local oscillator and its oscillations to be synchronized with a very accurate timing source, i.e. the timing source. Since the input to the stabilized local oscillator 238 is stable and accurate, the output of the stabilized local oscillator remains stable. . . . Thus, the output of the stabilized local oscillator 238 does not drift from, and remains at, the desired frequency. This is an advance over prior systems in which the frequency of the local oscillator drifted, thereby causing the output of the local oscillator to drift.

The following text is from the specification at page 18, line 4-page 19, line 4.

> The stabilized local oscillator 238 receives the GPS timing signal. The GPS timing signal is used as an input timing pulse into the stabilized local oscillator 238 to generate as an output to the LNB 218 a stabilized oscillator signal having a stable frequency. . . .
>
> The LNB 218 receives the communication signal from the LNA 214 and receives the stabilized oscillator signal from the stabilized local oscillator 238. The LNB 218 mixes the communication signal with the stabilized oscillator signal and generates the difference between the communication signal and the stabilized oscillator signal as an IF signal. The LNB 218 transmits the IF signal to the FOT . . . .
>
> The FOT 222 receives the IF signal from the LNB 218 and converts the IF signal to an optical signal. In this example, the FOT 222 transmits the optical signal as [an] optical IF signal over fiber optic cable from the upper portion 248 of the tower to the DFRS 226 at the base 250 of the tower.

VI. Grounds of Rejection

Claims 1-6, 8-62, and 64-68 stand rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 6,411,825, issued to Csapo et al. ("Csapo") in view of U.S. Patent No. 6,163,294, issued to Talbot ("Talbot"), and U.S. Patent No. 5,982,322, issued to Bickley et al. ("Bickley").

In the Advisory Action at page 3, lines 3-8, the Examiner withdrew the rejection of claims 1, 8, 11, 14, 26-27, 30, 35, 41-42, 45, 52, 55, 57, 64, and 67 under 35 U.S.C. § 103(a) as being unpatentable by U.S. Patent No. 5,930,683, issued to Csapo et al. ("Csapo") and withdrew the rejection of claims 6, 43, 50-51, 61, 65, and 68 under 35 U.S.C. § 103(a) as being unpatentable by Csapo in view of U.S. Patent No. 6,308,077, issued to Walsh ("Walsh").

VII. Argument

The Examiner rejected claims 1-6, 8-62, 64-68 under 35 U.S.C. § 103 as being unpatentable by U.S. Patent No. 6,411,825, issued to Csapo et al. ("Csapo") in view of U.S. Patent No. 6,163,294, issued to Talbot ("Talbot"), and U.S. Patent No. 5,982,322, issued to Bickley et al. ("Bickley").

A. Overview of Cited References

Bickley discloses a portable hand-held position locating radio that has a geolocation receiver for providing local position and timing information and a local transceiver for sending local position information to a communication system (e.g. an airborne or orbiting transceiver). Bickley, Abstract, lines 1-5. A crypto unit is provided between the receiver and the local transceiver for encrypting the local position information prior to transmission. A data processor coupled to the local transceiver, the receiver, and the crypto unit controls operation of the device,

including storing local position information and separating signals broadcast by the communication system into those intended or not intended for the device. Bickley, Abstract, lines 6-12.

The hand-held position locating radio is used for search and rescue operations for rescuing personnel. Bickley, column 3, lines 66-67 and column 4, lines 54-67. The hand-held position locating radio calculates its local position based on data received from the geolocation transceiver. Bickley, column 4, lines 33-39. The hand-held position locating radio then transmits the local position information to the satellite, and the satellite transmits the local position information to the base station. Bickley, column 4, lines 46-53.

The hand-held position locating radio of Bickley includes a real time clock and a GPS receiver that are coupled to a data processor. Bickley, column 5, lines 22-31. The data processor is coupled to the real time clock, to the transceiver, and to the user interface. Bickley, column 5, lines 32-24.

Signals that are received by the hand-held radio are amplified, demodulated, and sent to the data processor, a crypto unit, or an audio module. Column 7, lines 1-16. Decrypted audio ultimately is passed to a voice transducer. Bickley, column 7, lines 33-38. Alternately, output data from the crypto unit instructs the data processor to present data on a display. Bickley, column 7, lines 38-40.

Signals are generated from a frequency synthesizer. The frequency synthesizer also generates signals for modulation and demodulation. Bickley, column 8, lines 8-13. The output of the frequency synthesizer is controlled by data processor. Bickley, column 8, lines 13-15. The received signals of Bickley are processed to generate information via a voice transducer or a display. Bickley, column 7, lines 33-43. The hand-held position locating radio of Bickley does not down convert received signals for transmission over a fiber optic cable.

Talbot discloses an electronic distance measurement instrument for a telescope. Talbot, column 1, lines 9-14. Talbot uses reference signals from a satellite navigation receiver to automatically and precisely calibrate electronic distance measurement instruments and for servo-driving the telescopes in electro-optical total stations. Talbot, column 1, lines 9-14.

In Talbot, electronic distance measurement devices are mounted on theodolites that have telescopes that can precisely sight a horizontal and vertical angle to a target. Those combinations are electro-optical hybrids called "total stations." Talbot, column 1, lines 16-26. Combination

electronic theodolite and electronic distance meter (EDM) instruments allow surveyors to find the "space vector" from the instrument to a distant target. When a total station is connected to an electronic data recorder, field information can be quickly gathered and used to generate maps and plans in the office. Talbot, column 1, lines 27-31.

An EDM has an EDM transmitter for launching an outbound signal to a distant target and an EDM receiver for receiving a reflected signal from the distant target. Talbot, column 4, lines 19-23. A phase measurement device is connected to a reference oscillator and also to both the EDM-transmitter and EDM-receiver. Talbot, column 4, lines 24-26. The device measures the difference in the number of cycles of a reference frequency between the out-bound signal and the reflected signal. Talbot, column 4, lines 26-29. Post processing is then used to relate the corresponding measurements and time standards such that a distance to target measurement can ultimately be computed. Talbot, column 4, lines 35-38. A GPS master reference oscillator is used to correct signals from a navigation computer that maintain satellite tracking. Talbot, column 4, lines 51-54.

An EDM phase measurement subsystem is connected to a transmitter that sends an out-bound signal through a telescope to a distant target. Talbot, column 5, lines 25-27. The target may include a prism corner-cube reflector, or active repeater for microwave EDM, to return an in-bound signal. Talbot, column 5, lines 27-29. The signals may be infrared, other laser light, or microwave signals. Talbot, column 5, lines 29-31. The EDM phase measurement subsystem can conduct either pulse time-of-flight or carrier phase measurements to determine the line-of-sight distance to the target. Talbot, column 5, lines 31-34. A target range measurement is output that can be presented on a local display, recorded electronically, or transmitted to a user that is at the target and is moving the target around to mark a particular range from the system location. Talbot, column 5, lines 35-39.

A theodolite part of the system includes the telescope mounted to an angle measurement instrument connected to a servo actuator. Talbot, column 5, lines 40-42. A theodolite measurement includes an elevation and azimuth output that can be presented on a local display, recorded electronically, or transmitted to a user that is at the target and is moving the target around to mark a particular vector angle from the system location. Talbot, column 5, lines 42-47. A space vector to target signal is computed by the navigation computer from a target position seed input. Talbot, column 5, lines 47-49.

The navigation computer is able to compute the current position of the system and outputs this as a position estimate. Talbot, column 5, lines 50-52. From this position estimate, it is possible to determine the altitude and azimuth vector to the target. Talbot, column 5, lines 52-53. The space vector to target signal commands the servo to move the telescope so that it is roughly pointed at the target. Talbot, column 5, lines 54-56. The target location seed can be computed using differential satellite position calculations relative to the EDM reference station. Talbot, column 5, lines 60-63.

At column 5, line 64-column 6, line 9, Talbot discloses a total station that inputs a reference oscillator that is stabilized by a timing signal derived from a GPS receiver. Talbot states, for example, that GPS receivers output a utility one-pulse-per-second (1PPS) that can be used by a phase comparison and frequency control circuit to make minor corrections in the operating frequency of an oscillator. Talbot, column 6, lines 1-4. Such a reference oscillator may be a voltage-controlled oscillator (VCO) or a numeric controlled oscillator (NCO). Talbot, column 6, lines 6-9.

Talbot and Bickley do not disclose, teach, or suggest the claimed limitations. Appellant's claimed structure is not taught in Talbot or Bickley. Moreover, Talbot teaches an electronic distance measurement instrument and a servo-controller for a telescope and Bickley teaches a portable hand-held position locating radio.

Talbot and Bickley are not in the same art as the present Application. One skilled in the art would not look to a telescope distance measurement instrument or a portable hand-held position locating radio for knowledge about down-converting high frequency signals for a multipoint multichannel distribution service (MMDS) communication system.

Csapo discloses a base station transceiver subsystem (BTS). The BTS is divided into a main unit (PMU) and a radio unit (PRU). Csapo, column 6, lines 28-38. The PRU transmits and receives signals through at least one pole mounted antenna and communicates with the PMU via a plurality of wires, which may include a coax cable. Csapo, column 6, lines 38-42.

The PRU is composed of a transceiver module coupled to an antenna interface assembly. The antenna interface assembly is coupled to the antennas. Controller circuitry 126 controls the antenna interface and the transceiver. Csapo, column 4, line 67-column 7, line 5.

The PRU is coupled to the PMU through a set of cables that terminate in the PMU at the Transmit and Receive interface (T/R interface), which is coupled to the channel elements. The

channel elements modulate and demodulate CDMA signals. The PMU may also contain a global positioning receiver that provides clock and frequency signals to a main controller module, the channel elements, the T/R interface, and the PRU(s). Also within the PMU are a power system and a temperature control subsystem. Csapo, column 7, lines 11-28.

Each PRU comprises three modules: a transceiver module, an antenna interface module and controller circuitry. The antenna interface module may include a transmit power amplifier that amplifies the signal to a level required for desired cell coverage, two low-noise amplifiers (not shown), a duplexer module for transmitting and receiving signals to and from a single antenna, and a receiver filter. The transceiver module may include synthesizer circuitry, transmitter circuitry, and two receiver circuits. Csapo, column 7, lines 31-44.

The PMU is responsible for the digital termination of a wireless protocol. That is, for example, the PMU handles the landline-to-CDMA or CDMA-to-landline conversion. Csapo, column 8, lines 62-64.

"The PMU 105 includes six functional subsystems: a Pico-BTS main controller card 125 (PMCC), a Pico-BTS channel card 130 (PCC), a transmit and receive interface card 135 (TRIC), a time and frequency card 140 (TFC), and a power supply assembly 145 (PSA) for converting AC to DC and for distributing the DC power throughout the PMU 105 and the PRU 110." Csapo, column 9, lines 1-9.

All wires and coaxial cables may be bundled into a single polymer jacket. Thus, a single multi-wire/coaxial connector is used at both ends of the cable. The resulting cable is typically built as a unitary item that provides ease of installation and repair in the field. Thus, the cable diameter may easily be kept under 0.75 inches. Csapo, column 9, lines 43-48. Coaxial cables coming into the PRU are transformer coupled to the transceiver, which eliminates the possibility of ground loops (and their corresponding ground noise), and ensures that the PRU can be placed up to and in excess of 150 feet away from the PMU. Csapo, column 9, lines 51-55.

In the Background of the invention, Csapo states that "Output power calibration can be performed at the factory and the RU can be programmed for usage with any MU." Csapo, column 5, lines 10-14. Csapo also states "The PRU 110 also includes a controller portion 126 which includes a microprocessor and non-volatile memory to store calibration data and provide real-time temperature operating parameter compensation to the transceiver. Thus, a mobile station or mobile simulator is not needed for calibration, and system calibration in the field is

also no longer needed." Csapo, column 7, lines 45-50. However, these are the only references to "calibration" in the entire patent.

Csapo does not state what is meant by "calibration" or how the "calibration" occurs. Csapo never states what system components are used for the calibration.

Csapo does not state what is meant by "a time and frequency card 140," how it is used, or what is transmitted from it. Csapo does not state how GPS signals are used or by what system components GPS signals are used. The reference number 140 is used only twice in the entire Csapo patent: 1) "PMU 105 may also contain a global positioning receiver 140 which provides accurate clock and frequency signals to a main controller module 125, the channel elements 130, the T/R interface 135, and the PRU(s)" (Csapo, column 7, lines 22-26); and 2) "the PMU 105 includes six functional subsystems: a Pico-BTS main controller card 125 (PMCC), a Pico-BTS channel card 130 (PCC), a transmit and receive interface card 135 (TRIC), a time and frequency card 140 (TFC), and a power supply assembly 145 (PSA) for converting AC to DC and for distributing the DC power throughout the PMU 105 and the PRU 110" (Csapo, column 9, lines 1-7). Csapo discloses the following with regard to Figure 17: "The PMU may have a global positioning system (GPS) antenna connected to it." Csapo, column 12, lines 33-34.

That is the extent of any and all discussions about GPS in Csapo. Csapo does not state why someone might use GPS signals or how the signals are used or disclose any structure for processing or using GPS signals.

Csapo does not disclose or teach anything about a timing signal, that a GPS system can be used as a timing source, or anything else relevant to a conversion system using a GPS signal.

Csapo does not mention a stabilizing system. There is no mention in Csapo of a stabilizing system as claimed by Appellant or any device operating similar to Appellant's stabilizing system.

The Examiner stated that Csapo discloses a frequency synthesizer. A frequency synthesizer is not relevant to the claimed invention. Appellant does not claim a frequency synthesizer and does even discuss a frequency synthesizer in its application. It is not relevant to the claimed invention, to any obviousness analysis, or to combining any references.

Moreover, Csapo merely states that the "transceiver module 155 may include synthesizer circuitry, transmitter circuitry, and two receiver circuits (it is common to refer to a system's

transmitter and receiver circuitry collectively as a "transceiver")." Csapo, column 7, lines 41-44. There is no other reference to synthesizer circuitry or for what it is used.

B. Overview of Case Law and Fourth Office Action

To establish a *prima facie* case of obviousness, three basic criteria must be met.

> First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.
>
> Second, there must be a reasonable expectation of success.
>
> Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure.

In re Vaeck, 947 F.2d 488, ___, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991); Manual of Patent Examining Procedure (MPEP) 2143. When applying 35 U.S.C. 103, the Examiner must adhere to four tenets of patent law.

> (A) The claimed invention must be considered as a whole;
> (B) The references must be considered as a whole and must suggest the desirability and thus the obviousness of making the combination;
> (C) The references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and
> (D) Reasonable expectation of success is the standard with which obviousness is determined.

Hodosh v. Block Drug Co., Inc., 786 F.2d 1136, 1143 n.5, 229 USPQ 182, 187 n.5 (Fed. Cir. 1986); MPEP 2141.

To establish a *prima facie* case of obviousness, the Examiner must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references." *In re Fine*, 837 F.2d 1071, ___, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). The Examiner did not comply with these requirements.

"When examining claims for patentability, claims are interpreted as broadly as is reasonable and consistent with the specification." *In re Thrift*, 298 F.3d 1357, ___, 63 USPQ2d 2002, 2006 (Fed. Cir. 2002). The Examiner's reliance on "common knowledge and common sense" did not fulfill the agency's obligation to cite references to support its conclusions. *In re Lee*, 277 F.3d 1338, ___ 61 USPQ2d 1430, 1434 (Fed. Cir. 2002). Instead, the Examiner must document its reasoning on the record. *In re Lee*, 277 F.3d at ___, 61 USPQ2d at 1435. Here, the

Examiner made statements that one skilled in the art would modify a reference without providing citations to references and reasoned findings.

In re Lee also states "our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references." *In re Lee*, 277 F.3d at ___, 61 USPQ2d at 1434. In the Fourth Office Action at page 11, lines 10-16, the Examiner included the MPEP Form Paragraph with the citation to the *McLaughlin* case but only again stated what the Examiner already stated. Namely, the Examiner stated that the motivation to combine is found in Talbot because Talbot teaches using a GPS timing signal to reduce frequency drift. However, the Examiner did not state how this Talbot citation is a motivation to combine Bailey, Talbot, and Csapo and to modify the combination. The arguments are circular.

The Examiner stated that Appellant was attempting to import limitations into the claims from the specification. That is not the case. Appellant merely refuted the Examiners attempts to combine the references and asked the Examiner to comply with *In re Thrift*. The Examiner attempted to force teachings into the cited references where none exists.

In the Fourth Office action, page 12, lines 4-8, the Examiner stated that "in the knowledge generally available to one of ordinary skill in the art of satellite, it would have been obvious at the time the invention was made to modify Csapo, Talbot, and Bickley to either locate the PMU or placing the GPS receiver in a particular position (i.e. the top) of the tower that would reduce blockage of GPS satellite signals caused by high or tall buildings." The Examiner did not provide reasoned findings and only proposed the statement without any proof in violation of *In re Lee, In re Fine,* and *In re Kotzab*, 217 F.3d 1365, ___, 55 USPQ2d 1313, 1316 (Fed. Cir. 2000) (See discussion of *Kotzab* on pages 15, 18, 20-21, et al. herein). The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598. The Examiner's reliance on "common knowledge and common sense" does not fulfill the agency's obligation to cite references to support its conclusions. *In re Lee*, 277 F.3d at 1344, 61 USPQ2d at 1434. Instead, the Examiner must document the reasoning on the record. *In re Lee,* 277 F.3d at ___, 61 USPQ2d at 1435.

Appellant refuted the Examiner's "motivation" to modify the references by providing a Declaration by the inventors, by demonstrating secondary considerations from the application itself, and by explaining to the Examiner technical inaccuracies in the "motivation." The Examiner did not provide a suggestion to modify and used hindsight reasoning. The Examiner did not provide proof or reasoned findings. The Examiner did not comply with *In re Lee, In re Fine, In re Kotzab,* or *In re Thrift.*

Further, Appellant's claims are not directed to satellites. While some of the references cited by the Examiner have GPS components, Appellant does not agree that the references cited by the Examiner or the Appellant's claims are in the art of "satellites." Therefore, the combination asserted by the Examiner is improper.

Additionally, Appellant noted that the Examiner found the claims "just merely recite the location of the GPS or stable timing signals with respect to the tower position." Fourth Office Action, page 12, lines 3-4. Regardless of what the Examiner thinks about the claim limitations, they must still be taught in the cited references to sustain a rejection.

C. Overview of Declaration for Response to Provoke Advisory Action

Appellant filed a Response to Provoke Advisory Action in which Appellant summarized all then-pending issues and reasons for patentability. Appellant filed a Declaration from the inventors in that Response as evidence proving that the Examiner's reason for modifying the combination of references was not valid, namely to reduce blockage of GPS signals by tall buildings. In the Declaration, the inventors stated the following.

> "3. Global Positioning System (GPS) signals are generated from satellites that are orbiting the Earth. A GPS receiver receives GPS signals from one or more overhead satellites when the GPS receiver is in line-of-sight to the overhead satellite.
>
> 4. When the GPS receiver is in line-of-sight to the GPS satellite, a GPS receiver will receive a GPS signal even if buildings are around the GPS receiver. The GPS signal is not blocked by a surrounding building because the GPS signal is transmitted from an overhead satellite, not from a horizontally-based transmitter. A GPS receiver does not need to be placed on a tower or other structure to receive a GPS signal when buildings are around the GPS receiver. A GPS receiver does not need to be placed on a tower or other structure to reduce blockage of a GPS signal by a building, since the GPS signal is in line-of-sight to the GPS satellite.
>
> 5. For example, an intelligent transportation system (ITS) provides a GPS receiver in a vehicle to assist in GPS-based navigation, including route guidance, tracking, and emergency applications. The OnStar system is such a system. The GPS-based ITS navigation system operates in large cities with tall buildings and in rural areas. The ITS system uses GPS signals to track a vehicle through streets and other paths and to obtain

directions for a driver through streets and other paths. The GPS receiver in the vehicle is not on a tower, and it receives GPS signals from the overhead GPS satellites. (Applicants are NOT alleging the ITS system is or is not within the art of the present Application. Applicants are merely using the ITS system as an example to demonstrate that a GPS receiver does not require a tower to receive a GPS signal when the GPS receiver is in an area that has buildings.)

6. The information in paragraphs 3-5 was known at the time of the invention claimed in the Application."

D. Overview of Advisory Action and Appellant's Response Herein

The Examiner's Advisory Action was directed collectively at all pending claims. The Examiner provided new reasons for rejecting the claims in the Advisory Action. In order to provide a complete response herein, Appellant will first address each new reason provided in the Advisory Action rather than under each claim number sub-heading. This style is believed to comply with the substance of Rule 41.37.

The Examiner did not substantively respond to many of the reasons for patentability put forth in Appellant's Response to Provoke Advisory Action. Therefore, Appellant will also discuss those issues for each claim under each claim number sub-heading.

Because almost all of the issues with the rejections apply to claims 11 and 68, Appellant will first address those independent claims 11 and 68 and the associated law in "Section L" herein. Appellant will identify the issues for the remainder of the claims but not repeat the facts and the law if a reference can be made to one of the sub-headings in the discussion of claims 11 or 68. Appellant believes this will provide the reasons for patentability of all claims but not unnecessarily repeat arguments.

E. Advisory Action and Declaration

In the Advisory Action, the Examiner considered Appellant's Response to Provoke Advisory Action, including the Arguments and the Declaration. The Examiner replied to the Declaration and parts of the arguments. Therefore, Appellant believes the Declaration was entered as evidence in this application.

In response to the Declaration, the Examiner stated that the line-of-sight of a GPS receiver is changing with the position of the receiver as illustrated in the drawing below. The Examiner stated that "the LOS1 of the GPS receiver at position 1 is wider than the LOS2 of the GPS located at position 2, this implies that by placing the GPS at the position 1, the GPS signals

blocked by buildings would be reduced as compared to the GPS located at position 2." Advisory Action, page 2, lines 8-11.

Here, the Examiner found that placing a GPS receiver in a special position implies an analysis. The Examiner did not find that his statement necessarily requires the modification. The Examiner did not offer actual proof.

More importantly, the Examiner imported special requirements into the cited references that 1) there must be some special requirement to receive an elevated quantity or quality of signals and, therefore, one skilled in the art has an actual need to modify the reference to reduce blockage of signals; 2) there are buildings; and 3) the buildings block the signals. The Examiner is claiming that there is a special requirement in the Csapo system such that the quantity or quality of signals received at position 2 would not be sufficient. However, Csapo does not discuss any issues with buildings or blocked signals or any reason to modify the components taught in Csapo. Thus, even if the Examiner is correct in stating the signals are partially blocked at any position, it is not relevant to any teachings of Csapo and it is not relevant to Appellant's claims.

No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. No reference discusses a special need for any elevated quantity or quality of signals.

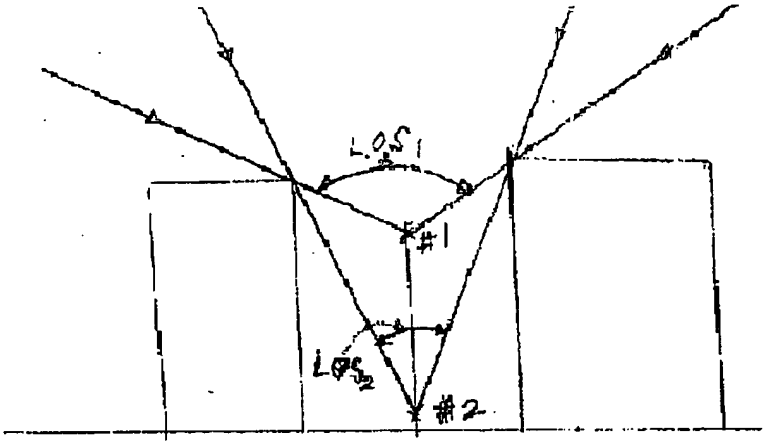
The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal. Neither Appellant nor any cited reference specifies that a GPS signal has to be received at any special position, that any special quality or quantify of signals are required, or that there are any other special requirements.

One skilled in the art would not build an expensive and bulky structure such as a tower if there was not a special requirement to receive a special elevated quantity or quality of signals or there was some other need. It is difficult to obtain permits to build communication towers, permits may not always be available, generally an area for a tower is leased or some other fee is paid, the tower itself is expensive to build and operate, and a company must comply with many other ordinances and laws to build and operate such a tower. As Appellant pointed out, companies are always trying to save money and would not build a tower unless required. These are all evidence and secondary considerations why one skilled in the art would NOT build a

tower. "A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1316.

The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors. The Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references, and the Examiner imported special requirements for an elevated quality and quantity of signals into the cited references in an attempt to further modify the teachings in the references to meet the claimed limitations. One skilled in the art would not modify the cited references as stated by the Examiner without that special requirement.

Neither Appellants claims nor any cited reference teaches or suggests that a special quantity or any quantity of signals is required or received. Appellant's claims only require one GPS signal to be received. It is not relevant to Appellant's claims or to any cited reference whether one or multiple GPS signals are received or whether a GPS signal is received at any particular position, such as position 1 or position 2, or from any one or more of the GPS satellites.



F. Advisory Action and Obviousness Rejection and No Suggestion to Combine and Modify

The Examiner found that Csapo is silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. See Advisory Action, page 4, line 20-page 5, line 2.

On pages 5 and 6 of the Advisory Action, the Examiner found that many references were to be combined to reach a base line of knowledge, the references had to be modified by another reference or by knowledge generally available in the art, many claim limitations had to be found inherently disclosed in a reference, many of the inherently disclosed claim limitations had to be modified by one or more other references multiple times, and all of that had to be combined to reach the claim limitations. In an effort to address the Examiner's reasoning for the obviousness rejection, Appellant examines each statement by the Examiner that led to his conclusion of obviousness. See Advisory Action, page 5, line 2– page 6, line 22. Appellant believes the Examiner erred on multiple issues.

1. *Csapo teaches that the GPS receiver provides frequency signals to the PRU.* Advisory Action, page 5, lines 2-3.

2. *"The PRU comprises a transceiver module which includes a frequency synthesizer."* Advisory Action, page 5, line 4. Appellant does not claim a frequency synthesizer.

3. *A block converter is inherently disclosed.* Advisory Action, page 5, line 5.

The Examiner did not find that the entire claimed block converter limitation is inherently disclosed in Csapo or any other reference, and it would be impossible for the Examiner to make such a claim. The entire block converter limitation is not disclosed in Csapo or any other cited reference inherently or explicitly. That limitation is the following: "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal."

4. *"Since it is well known in the art that a[sic] frequency synthesizer is a voltage controller oscillator (VCO) with internal phase lock loop (PLL) for generating a variety of pre-determined frequencies derived from a stable master oscillator which is in turn calibrated by accurate timing or frequency from a GPS as taught by Bickley."* Advisory Action, page 5, lines 6-10.

Appellant's claims do not include a frequency synthesizer. What is or is not known in the art of frequency synthesizers has no bearing on the present claims. Moreover, Bickley is directed to a portable hand-held position locating radio. Bickley does not have any bearing on Talbot or Csapo. Bickley is not analogous art to be used as the basis for an obviousness rejection.

The Examiner mis-stated what is taught in Bickley. Bickley states that "Frequency synthesizer 100 is desirably a voltage controlled oscillator with internal phase lock loops or other

arrangements well known in the art for generating a variety of predetermined frequencies derived from a stable master oscillator . . ." Bickley, column 8, lines 1-5. Thus, the citation states that internal phase lock loops or other arrangements are well known in the art. It does not state that "*it is well known in the art that a[sic] frequency synthesizer is a voltage controller oscillator (VCO) with internal phase lock loop (PLL) for generating a variety of pre-determined frequencies derived from a stable master oscillator . . .*"

Bickley further states, in regard to the master oscillator, ". . . which is in turn calibrated by accurate timing or frequency signals from clock 41 and GPS receiver 34 via data processor 38." Bickley, column 8, lines 5-7. Bickley does not state what is meant by "calibrated," how any type of "calibration" occurs, or what components are used for the calibration. Bickley does not state what is considered to be a "master stable oscillator" or how it is calibrated. The Examiner cannot simply assume that Bickley teaches the claimed limitations without proof and without a reasoned statement. This violates *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598, *In re Lee*, 277 F.3d at 1344, 61 USPQ2d at 1434, and *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317.

The Examiner must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references" and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598. Reliance on "common knowledge and common sense" does not fulfill the agency's obligation to cite references to support its conclusions. *In re Lee*, 277 F.3d at 1344, 61 USPQ2d at 1434. Instead, the Examiner must document the reasoning on the record to allow accountability. *In re Lee,* 277 F.3d at ___, 61 USPQ2d at 1435.

The Examiner must provide particular findings related to the showing of the motivation to combine. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. Broad, conclusory statements standing alone are not "evidence." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317.

References and citations from those references cannot be viewed in the abstract. Rather, they must be considered in the context of the teaching of the entire reference. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. A rejection cannot be predicated on the mere identification in the reference of individual components of claimed limitations. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for

combination in the manner claimed. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. The Examiner did not fulfill these requirements.

5. *". . . it would have been obvious to apply the stable master oscillator calibrated by the GPS of Bickley to the system in Csapo in order for the GPS receiver to provide frequency (or timing) signals to the frequency synthesizer for calibrating, which in turn provide a stabilized oscillator to the block converter for converting the high frequency to a low frequency signal."* Advisory Action, page 5, lines 10-14.

The Examiner did not provide any suggestion to combine Csapo and Bickley to "apply" the stable master oscillator to the system of Csapo. Even if the Examiner could supply a suggestion to combine, it would not be relevant since Bickley does not state how its master oscillator is calibrated, what is meant by calibrated, and what is meant by stable. The Examiner simply cannot state that the combined structures are the same as, or teach, the claimed structure.

The Examiner also did not provide any suggestion to further modify the combined Csapo and Bickley system to provide the frequency signals to a frequency synthesizer for calibrating. Note that, in the single quote above, the Examiner first combined the Csapo and Bickley systems. The Examiner then modified those combined systems (first modification of the combined systems) and supplied frequency signals in that modified system to a frequency synthesizer. Notwithstanding the fact that the existence of a frequency synthesizer is not relevant to the present claims since Appellant does not claim a frequency synthesizer, the Examiner did not provide a suggestion to further modify the combined system to provide the frequency signals to a frequency synthesizer for calibrating.

The Examiner also did not provide any suggestion to again modify the already modified combined Csapo and Bickley system to "in turn provide a stabilized oscillator to the block converter for converting the high frequency to a low frequency signal." Note that this is the second modification of the combined Csapo and Bickley systems in the single quote above, all without a suggestion to combine and modify the references. Moreover, the entire block converter limitation referenced in this portion of the action must be found inherent for the Examiner's argument to be accepted, including each portion of its limitation.

6. *"By using the GPS signal to calibrate the VCO of the frequency synthesizer, this GPS would provide a reference frequency (or timing) signal to the oscillator."* Advisory Action, page 5, lines 15-17.

As noted above, Bickley does not teach what is meant by "calibration" or how it occurs. The Examiner cannot assume that the GPS signal is used to provide a "reference" frequency or timing signal to the oscillator or for any specific purpose. Bickley simply does not teach it. This is the third modification of the combined Csapo and Bickley systems, all without a suggestion to modify.

7. *"Therefore, it is believed that in the knowledge generally available to one of ordinary skill in the art, based on Csapo's teaching of using the GPS receiver to provide frequency signals to the PRU . . . and in order to perform the frequency conversion . . ., one skilled in the art would understand that Csapo would implicitly disclose a 'stabilizing system' in that the GPS signal is used to provide a stabile timing signal to calibrate the VCO of the frequency synthesizer, in order to provide an oscillator signal to the block converter (mixer) to perform the high/low frequency conversion."* Advisory Action, page 5, line 17-page 6, line 2.

The Examiner claims that this portion of the rejection is based on knowledge generally available to one skill in the art, without providing reasoned proof of the basis of that statement. This violates *In re Lee, In re Fine,* and *In re Kotzab* as explained above.

The Examiner also claims that a stabilizing system is inherently disclosed in Csapo. It is a significant jump to state that Appellant's claimed stabilizing system is implicitly disclosed in Csapo.

To make a claim of inherency, the Examiner must find that every claimed limitation is necessarily present in Csapo. "The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic." *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993). "To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999) (citations omitted).

The Examiner cannot claim that the missing descriptive matter is necessarily present. To only reach this point in the action, one has to find already that 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by

the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided. To find this limitation inherently disclosed, one must find that all of items 1-8 must necessarily be present in the reference. Appellant urges that the Examiner has not proved this to be the case and cannot prove this to be the case.

Moreover, the Examiner only alleges that "a stabilizing" system is implicitly disclosed. The Examiner did not allege that the claimed stabilizing system is inherently disclosed.

The Examiner stated that a stabilizing system is inherently disclosed "*in that the GPS signal is used to provide a stabile timing signal to calibrate the VCO of the frequency synthesizer, in order to provide an oscillator signal to the block converter (mixer) to perform the high/low frequency conversion.*" Advisory Action, page 5, line 21-page 6, line 2. Here, the Examiner made an allegation not substantiated by any proof, reasoned or otherwise. The Examiner did not provide any citation for the statement that the "*GPS signal is used to provide a stabile timing signal to calibrate the VCO of the frequency synthesizer.*" No cited reference claims that a GPS signal is used as a "stable" timing signal.

The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598. The Examiner must document the reasoning on the record. *In re Lee,* 277 F.3d at ___, 61 USPQ2d at 1435. The Examiner must provide particular findings related to the showing of the motivation to combine. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. Broad, conclusory statements standing alone are not "evidence." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317. "The Patent and Trademark Office found prior art statements that in the

abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1318.

The Examiner only made general allegations without proof in violation of *In re Lee, In re Fine,* and *In re Kotzab.* The Examiner cannot make general allegations without proof.

8. "*However, Csapo does not specifically recite the frequency (or timing) signal of the GPS as being 'stable.'*" Advisory Action, page 6, lines 3-4.

The Examiner admitted that his statement in Item 7 above was false, namely that the stabilizing system was necessarily implicit in the teachings of Csapo. In fact, the Examiner alleged at this point that the stabilizing system is not taught in Csapo at all, implicitly or otherwise.

9. "*However, Talbot discloses a communication device wherein the GPS timing signal is used to provide the 'stable' timing signal to the operating frequency of the oscillator 74 . . . to correct long-term drift (see Fig. 2).*" Advisory Action, page 6, lines 4-7.

Talbot is directed to a telescope electronic distance measurement instrument. See Talbot Title, Abstract, and Field of the Invention. Talbot includes an EDM that has an EDM transmitter for launching an outbound signal to a distant target and an EDM receiver for receiving a reflected signal from the distant target. A phase measurement device is connected to the reference oscillator and to both the EDM-transmitter and EDM-receiver. The device measures the difference in the number of cycles of a reference frequency between the out-bound signal and the reflected signal. Post processing is then used to relate the corresponding measurements and time standards such that a distance to target measurement can ultimately be computed. A GPS master reference oscillator is used to correct signals from a navigation computer that maintain satellite tracking. Talbot, column 4, lines 19-54. Talbot is not analogous art. Talbot is not properly combinable with Bickley and Csapo.

10. "*Since Csapo does suggest that the GPS receiver provides frequency signals to the PRU (remote unit), it would have been obvious to one or ordinary skill in the art at the time the invention was made to provide the above teachings of Talbot to Csapo for providing a 'stable' timing signal derived from the GPS receiver to the oscillator of the synthesizer of the PRU, thereby providing a stabilizing system as claimed, for reducing long-term frequency drift in the*

oscillator signal of the synthesizer (Talbot's motivation, see Fig. 2)." Advisory Action, page 6, lines 7-13.

The Examiner did not provide a suggestion to combine the references. "Since Csapo does suggest that the GPS receiver provides frequency signals to the PRU" is not a suggestion to combine Csapo with Talbot and Bickley. The Examiner merely made a general allegation without any proof. The Examiner must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references" and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598. The Examiner must document the reasoning on the record. *In re Lee*, 277 F.3d at ___, 61 USPQ2d at 1435.

The Examiner did not just combine Talbot with Csapo here without a suggestion to combine. Before even making this combination, one has to go through steps 1-9 above, including finding several claim limitations inherently disclosed, combining Csapo with Bickley with no suggestion to combine, modifying the combined Csapo and Bickley system without a reason to modify, modifying the already modified combined Csapo and Bickley system two more times without a reason to modify, and finding another limitation is implicitly disclosed even though the Examiner admits it is not implicitly disclosed.

11. "*Here, regarding the combination, Bickley's teaching is used solely for its discussion of the frequency synthesizer characteristics and the relationship of the oscillator signal and the GPS receiver. Talbot's teaching is used solely for its teaching of using the GPS timing signal as a 'stable' timing signal for the oscillator to prevent long-term drift.*" Advisory Action, page 6, lines 13-17.

Where is the suggestion to combine the three references and to modify the combined references multiple times? The Examiner did not attempt to provide a suggestion to combine Bickley with Csapo, a suggestion to modify that combination multiple times, and a suggestion to combine Talbot with the modified and combined Csapo and Bickley systems.

The Examiner stated that he used Bickley for its technical discussion of a frequency synthesizer and an oscillator, but what is the suggestion to combine it with Csapo? The Examiner stated that he used Talbot for its technical discussion of a GPS signal, an oscillator, and long-term drift, but what is the suggestion to combine the telescope distance measurement instrument of Talbot Csapo with the hand-held position locating radio of Bickley and the BTS of

Csapo? What is the suggestion to make further modifications to the combined systems of Csapo, Bickley, and Talbot? The Examiner repeated each discussion of Bickley and Talbot several times. But, this does not take the place of a suggestion to combine the three references and a suggestion to modify the combined references. The Examiner did not provide any suggestions for such combinations or modifications other than general allegations.

12. *"Although Talbot does not disclose a base station, its teaching is pertinent to the particular problem with which the applicant is concerned . . . hence, it can be relied upon as a basis for rejection of the claimed invention. See In re Oetiker, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992)."* Advisory Action, page 6, lines 18-22.

The Examiner's reliance on *Oetiker* is mis-placed. The Examiner incorrectly stated the holding of *Oetiker*. The Court in Oetiker first discussed the issue of a *prima facie* case of obviousness.

> The *prima facie* case is a procedural tool of patent examination, allocating the burdens of going forward as between examiner and applicant. . . . The term "*prima facie* case" refers only to the initial examination step. *In re Piasecki*, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); *In re Rinehart*, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). As discussed in *In re Piasecki*, the examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability. If that burden is met, the burden of coming forward with evidence or argument shifts to the applicant. After evidence or argument is submitted by the applicant in response, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument.

In re Oetiker, 977 F.2d 1443, ___, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The Court then discussed the facts of the case and the state of the case law.

> Oetiker argues that there is no suggestion or motivation to the artisan to combine the teachings of the cited references, and that Lauro is nonanalogous art. Oetiker concludes that these references were improperly combined; that a person of ordinary skill, seeking to solve the problem facing Oetiker, would not look to the garment art for the solution. Oetiker also argues that even if combined the references do not render the claimed combination obvious. The examiner stated that 'since garments commonly use hooks for securement', a person faced with the problem of unreliable maintenance of the pre-assembly configuration of an assembly line metal hose clamp would look to the garment industry art. The examiner explained further by stating that 'Appellant's device as disclosed could be utilized as part of a garment'. The Board did not repeat or support the examiner's argument, or discuss its relevance. Indeed, the argument is not supportable. However, the Board held that the Lauro reference, although not 'within the appellant's specific field of endeavor' is nonetheless 'analogous art' because it relates to a hooking problem, as does Oetiker's invention.

> The Board apparently reasoned that all hooking problems are analogous. At least, that is the argument now pressed by the Commissioner. . . . While this court may take judicial notice of common everyday mechanical concepts in appropriate circumstances, the Commissioner did not explain why a 'catch' of unstated structure in an electrical switch, for example, is such a concept and would have made Oetiker's invention obvious. Indeed, the Commissioner did not respond to Oetiker's argument that the cited references provide no teaching or suggestion that Lauro's molded hook and eye fastener, even if combined with Oetiker's '004 clamp, would achieve Oetiker's purpose.

In re Oetiker, 977 F.2d at ___, 24 USPQ2d at 1445.

In order to rely on a reference as a basis for rejection of the applicant's invention, the reference must either be in the field of the applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned. *In re Oetiker*, 977 F.2d at ___, 24 USPQ2d at 1445.

> It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself. *Diversitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 678-79, 7 USPQ2d 1315, 1318 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686, 687, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1147, 227 USPQ 543, 551 (Fed. Cir. 1985). [5] Oetiker's invention is simple. Simplicity is not inimical to patentability. *See Goodyear Tire & Rubber Co. v. Ray-O-Vac Co.* , 321 U.S. 275, 279, 60 USPQ 386, 388 (1944) (simplicity of itself does not negative invention); *Panduit Corp. v. Dennison Mfg Co.*, 810 F.2d 1561, 1572, 1 USPQ2d 1593, 1600 (Fed. Cir.) (the patent system is not foreclosed to those who make simple inventions), *cert. denied*, 481 U.S. 1052 (1987). We conclude that the references on which the Board relied were improperly combined.

In re Oetiker, 977 F.2d at ___, 24 USPQ2d at 1445-1446.

The Examiner cannot merely allege that the problems to be solved by multiple references are the same and then combine the references. The problem to be solved by the cited reference must be in the "field of endeavor" or be "reasonably pertinent" to the problem to be solved by Appellant's claimed invention. The problem to be solved by Talbot was to provide electronic distance measurements for telescopes and to servo-drive the telescopes. See Talbot, Abstract

and Summary of the Present Invention. Talbot is not in the same field of endeavor as Appellant's invention, and it is not reasonably pertinent to Appellant's claimed invention.[1]

Even when reasonably pertinent, the Examiner must still show that the art is analogous. As shown in *Oetiker*, a combination of non-analogous art references cannot be made simply by alleging that the references solve the same problem. Even when the foregoing is shown, the Examiner must still show "some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination." *Id.* That knowledge can not come from the applicant's invention itself. *Id.*

The Examiner did not demonstrate that the references are analogous. The Examiner did not demonstrate that Talbot and Bickley are in the same field of endeavor as Appellant's claimed invention (or Csapo) or that Talbot and Bickley are reasonably pertinent to Appellant's invention (or Csapo). The Examiner did not demonstrate that the references are properly combinable. Even if the references are analogous and properly combinable, the Examiner did not show some objective "reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination."

In order to agree with the Examiner, one would have to conclude the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, 9) a stabilizing system is inherently disclosed in Csapo and <u>any</u> inherently disclosed stabilizing

[1] The problem to be solved by Bickley was to provide a radio system suitable for use for search and rescue operations. See Bickley, Title, Abstract, and column 3, lines 66-67. Bickley is not in the same field of endeavor as Appellant's invention, and it is not reasonably pertinent to Appellant's claimed invention.

system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently, 10) all of the foregoing combinations and modifications and inherently disclosed limitations can be combined with Talbot without a suggestion to combine all three of the references and without a suggestion to make all of the modifications, and 11) for claim limitations identifying a portion of a tower, the Examiner can modify all of the foregoing without a reason to modify and in opposition to all evidence and the Declaration presented by Appellant. This is a tall order.

G. "Because The References Disclose Communication Devices" Is Not a Valid Suggestion to Combine

The Examiner never explained how the Talbot citation is a motivation to combine a reference that discloses a telescope distance measurement instrument (Talbot) with a reference that discloses a portable hand-held position locating radio (Bickley) and another reference that discloses a base station transceiver (Csapo) and to modify the combined references. The Examiner's explanation is that because Talbot and Csapo are both directed to a communication device, their combination is proper. Advisory Action, page 7, lines 9-11.

However, this is the same reasoning that was rejected by the *Oetiker* court.

> The Board held that the Lauro reference, although not 'within the appellant's specific field of endeavor' is nonetheless 'analogous art' because it relates to a hooking problem, as does Oetiker's invention. The Board apparently reasoned that all hooking problems are analogous. . . . It has not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments. The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a *prima facie* case of obviousness. There must be some reason, suggestion, or motivation found in the prior art whereby a person of ordinary skill in the field of the invention would make the combination. That knowledge can not come from the applicant's invention itself. . . . . We conclude that the references on which the Board relied were improperly combined.

In re Oetiker, 977 F.2d at ___, 24 USPQ2d at 1445-1446. The reasoning also does not comply with *Ruiz*, as stated above.

The Examiner did not even mention Bickley in the Advisory Action at page 7, lines 9-11. The Examiner provided no motivation or suggestion for its combination with Csapo and Talbot.

H. Advisory Action and No Suggestion to Combine: Examiner's Alternate Reasons

It appears from the Advisory Action that the Examiner could not provide a suggestion to combine the three references and to then modify the references multiple times and, therefore, the Examiner suggested alternate reasons.

1. First, the Examiner stated that there is a suggestion to combine all three references in the references themselves, i.e. for providing a stabilized local oscillator signal derived from the GPS receiver. Advisory Action, page 7, lines 18-20. However, "providing a stabilized local oscillator signal derived from the GPS receiver" is not found in any reference.

In support of his statement, the Examiner stated "see Bickley, col. 8, lines 1-19 and Talbot, Figs. 2-3 and col. 5, line 64-column 6, line 9." Advisory Action, page 7, lines 20-21. The Examiner attempted to use the theory that the motivation to combine the references is found in the references without any basis. The Examiner gave a general cite and left it up to Appellant to try to figure out exactly how the citations motivate one skilled in the art to combine all three references and to modify the combined references multiple times in the manner suggested by the Examiner. The Examiner refused to answer the simple issue of how the cited portions suggest to one skilled in the art to combine all three references and to modify the combined references multiple times.

Instead of demonstrating a motivation to combine from one reference, the Examiner combined the references by starting with some disclosure of a base station in Csapo, selecting one citation from a telescope distance measurement instrument and using it for both a technical disclosure and a reason to combine with the base station, modifying that combination without demonstrating any suggestion, and combining the modified combination with a citation from a portable hand-held position locating radio that also is used for both a technical disclosure and a suggestion to combine. Of course, the Examiner also expects a series of technical aspects to be found inherently disclosed in the references along the way. The Examiner pulled piece meal teachings from each reference and attempted to combine them in a manner explicitly disavowed in *Ruiz*, as discussed above.

2. Second, the Examiner stated that because all three references disclose a communication device, it would be obvious to combine them to reach the claimed limitations. See Advisory Action, page 7, line 21-page 8, line 2. As explained above, this is expressly cautioned against in *Oetiker*.

3. Third, the Examiner stated "the examiner believes that the combination of Csapo, Bickley and Talbot is proper and that the reason to combine the references is to reduce long-term frequency drift of the oscillator signal, which is clearly illustrated in Fig. 2 of Talbot's references." How does this one statement found in Talbot suggest to one skilled in the art to select teachings from the base station in Csapo, select teachings from the telescope distance measurement instrument in Talbot, and select teachings from the portable hand-held position locating radio in Bickley, find teachings inherent in the references even though the Examiner states that portions of the limitation are not found in the reference, combine all three systems, and modify the three combined systems to reach Appellant's claimed limitations? It doesn't. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper.

I. Advisory Action and Hindsight Reasoning

Appellant pointed out that the Examiner was using hindsight to reconstruct Appellant's invention. The Examiner responded by citing *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971) for the proposition that it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning; but, so long as it takes into account only knowledge which was within the level of ordinary skill in the art at the time the invention was made, and does not include knowledge gleaned only from the applicant's disclosure such a reconstruction is proper. Advisory Action, page 7, lines 1-7. The Examiner further stated "[h]ere, the motivation for using the GPS timing signal to reduce frequency drift in the oscillator signal is clearly illustrated in Fig. 2 of the Talbot reference." Advisory Action, page 7, lines 7-11. The Examiner did not make any further statements on the issue.

Basically, the Examiner just stated that Talbot teaches using a GPS signal to reduce frequency drift. The Examiner did not state that he found a motivation to combine all three references to meet the claimed limitations or to modify the combined references. This is clear error.

Further, the Examiner did not follow the teachings of the *McLaughlin* and recent Federal Circuit case law. As explained recently:

> "[i]n making the assessment of differences, section 103 specifically requires consideration of the claimed invention 'as a whole.' Inventions typically are new

> combinations of existing principles or features. The 'as a whole' instruction in title 35 prevents evaluation of the invention part by part. Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result – often the very definition of invention. Section 103 precludes this hindsight discounting of the value of new combinations by requiring assessment of the invention as a whole. This court has provided further assurance of an 'as a whole' assessment of the invention under §103 by requiring a showing that an artisan of ordinary skill in the art at the time of invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would select the various elements from the prior art and combine them in the claimed manner. In other words, the examiner or court must show some suggestion or motivation, before the invention itself, to make the new combination."

Ruiz v. A.B. Chance Co., 357 F.3d 1270, ___, 69 USPQ2d 1686, 1690 (Fed. Cir. 2004).

The Examiner did exactly what is cautioned against in *Ruiz* and *Oetiker*. The Examiner broke the invention into component parts and then attempted to find prior art references that teach the component parts. The Examiner provided a single citation for one of the component parts and for the "motivation" to combine all three references. The Examiner never provided a motivation to combine all three references and to modify the combined references, as explained above. Appellant has shown that all of the component parts are NOT shown in the prior art. Appellant has further shown that, even if one thinks all of the component parts are shown in the prior art, the Examiner did not provide a motivation to combine all three references and to modify the combined references to reach the claimed limitations. The Examiner reconstructed Appellant's invention only with the benefit of hindsight. This is insufficient to present a *prima facie* case of obviousness.

J. Advisory Action and MMDS Signals

Appellant pointed out to the Examiner that the references do not teach multipoint multichannel distribution service (MMDS) based communication signals. The Examiner stated that "since MMDS signal is just a high frequency signal (1.7-2.7 GHz) that provides a platform for providing services such as broadband data, voice, video and high-speed internet access (see specification page 6, lines 12-19) and is well known in the art, and since Csapo discloses a base station communicating with a plurality of mobile stations utilizing a plurality of signal protocols and can operate on various frequencies (see Abstract and col. 8, lines 48-55), it would have been

obvious . . . to modify Csapo for providing the base station with MMDS capability for communicating to mobile or fixed facilities . . . for expanding enhanced services in order to fulfill customer needs." Advisory Action, page 8, line 19-page 9, line 6. "Here, the reason to modify Csapo to provide MMDS capability to the base station is expand services (i.e. provide TV, video or high speed LAN access) of the base station, thereby fulfilling customer needs." Advisory Action, page 9, lines 7-10.

According to the Examiner, the need to expand services such as TV and video is a reason to modify for one skilled in the art to reach the claimed limitations, and this reason fulfills the requirements of *Oetiker*, the Federal Circuit law, and the Board's decisions. According to this theory, everything invented in the telecommunications industry after the telegraph would not be patentable. The telephone was invented to expand services to enable voice communication. Wireless technologies were invented to expand services over purely wireline systems. Fiber optic systems were invented to create higher bandwidth, and thereby expand services. According to the Examiner's stated reason to modify Csapo, none of these systems are patentable.

Appellant submits that this stated reason is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references" and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations. At least, Appellant did not locate one.

Further, the Examiner did not identify a viable way that the telescope distance measurement instrument of Talbot or the portable hand-held position locating radio of Bickley can be technically modified to receive MMDS based communications. Neither the telescope distance measurement instrument of Talbot nor the portable hand-held position locating radio of Bickley would use MMDS signals. Neither of these systems provides any other services.

The Examiner ignored the fact that modifying Talbot and Bickley as suggested by the Examiner would render Talbot and Bickley inoperative and unusable for their intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d 900, ___, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Neither of the systems would be modified to operate with MMDS communications.

The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. The Examiner's purported reason to combine the references is not valid.

The Examiner stated that because the MMDS is only recited in the preamble, it is given very little patentable weight. Advisory Action, page 9, lines 10-11. The Examiner did not cite any portion of the MPEP or any Federal Circuit case or Board decision for the proposition that he can ignore this MMDS limitation. Quite simply, none exists. A claim preamble may include a limitation where the preamble is used to define the subject matter of the claimed invention. *NTP, Inc. v. Research in Motion, Ltd.*, 392 F.3d 1336, ___, 73 USPQ2d 1231, 1247 (Fed. Cir. 2004); *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d 615, ___, 34 USPQ2d 1816, 1821 (Fed. Cir. 1995).

The MMDS terminology limits the structure of the claimed invention. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989).

The Examiner must find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d 1253, ___, 73 USPQ2d 1364, 1366 (Fed. Cir. 2004); See Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d 1327, ___, 69 USPQ2d 1481, 1489 (Fed. Cir. 2004) (finding "no evidence of particular prior art references that can be properly combined to show each of the limitations of this claim"). That includes the MMDS limitation.

K. Advisory Action and Upper Portion of Tower

The Examiner stated that "it is noted that since the GPS signal is used to provide frequency signals to both the PMU and the PRU units (Csapo, col. 7, lines 22-26), it would have

been obvious to locate the GPS either at the PMU or at the PRU." Advisory Action, page 9, lines 13-17. The Examiner did not offer any reason for this statement or any proof. The Examiner did not offer any reasoned statement in violation of *In re Lee, In re Fine,* and *In re Kotzab*, as cited above. The Examiner did not offer any suggestion to modify Csapo to reach this claimed limitation in violation of *Oetiker* and *Ruiz*.

The Examiner further stated that it would have been obvious to modify Csapo to place the GPS receiver at the top or upper portion of the tower to "generally reduce the blockage of GPS satellite signals from multiple satellites caused by surrounding tall buildings as compared to placing the GPS receiver at the bottom or lower portion of the tower." As explained above, the Examiner imported special requirements for the quality or quantity of signals, which is not found either in Csapo or Appellant's claims. Appellant's claims require only one GPS signal, and neither Appellant nor any cited reference even discusses a requirement for a special quantity or quality of signals.

Further, the Examiner expressly disregarded Appellants Declaration, secondary considerations, and evidence that demonstrate the Examiner's mis-characterization of the art, the knowledge of one skilled in the art, and that the modification of the combined references was improper. Evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, ___, 218 USPQ 871, 879 (Fed. Cir. 1983); *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, ___, 231 USPQ 81, 90 (Fed. Cir. 1986), *cert. denied*, 480 U.S. 947 (1987). After evidence or argument is submitted by the applicant, patentability is determined on the totality of the record, by a preponderance of evidence with due consideration to persuasiveness of argument. *In re Oetiker*, 977 F.2d at ___, 24 USPQ2d at 1444.

L. Claim Groupings

Many of the issues with the claim rejections apply to all of the claims. Therefore, Appellant will first discuss those issues under the sub-heading "All Claims." Because many of the remaining issues with the claim rejections apply to claims 11 and 68, Appellant will then address those independent claims 11 and 68 and dependent claims 12 and 13. To the extent possible, Appellant will identify the issues for the remainder of the claims but not repeat the facts and the law if a reference can be made to one of the sub-headings in the discussion of "All

Claims," "Claim 11," or "Claim 68." Appellant believes this will provide the reasons for patentability of all claims but not unnecessarily repeat arguments.

The claim sub-headings may identify claims having the same or similar limitations with a "/" between the claim numbers. Appellant has listed these claims together only upon the first instance of the applicable claim limitation. For example, the sub-heading "Claim 3/9" identifies arguments that apply to claim 3 and to claim 9. However, claim 3 depends from claim 1, and claim 9 depends from claim 8. Therefore, the arguments from these dependent claims should be read from their respective independent claims. These claims do not stand or fall together.

Claims that are grouped together and that stand or fall together are identified with a "-" or a "," (a dash or a comma) in the claim sub-heading. For example, claims 1, 4, and 5 are identified in the the claim subheading "Claims 1, 4, 5" and all stand or fall together.

All Claims

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

The Examiner did not identify each portion of each limitation of many of the claims in his rejection in the Fourth Office action. The Examiner attempted to resolve this issue in the Advisory Action. See pages Advisory Action, 3-4. However, the Examiner merely identified a communication tower, an antenna, a block converter, a fiber optic transmitter, a fiber receiver, a converting system configured to convert a communication signal to a lower frequency signal and to convert the lower frequency signal to an optical signal and to transmit the optical signal to an optical receiving system, a timing source, a GPS receiver, amplifiers, and a filter.

However, the Examiner still did not identify each portion of each claim limitation. The Examiner disregarded the portions of the claim limitation. Those portions of claim limitations are addressed under each claim sub-heading.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d at 1534, 28 USPQ2d at 1957. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d at 745, 49 USPQ2d at 1950-51. In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy,* 17 USPQ2d at 1464. The examiner must provide objective evidence to support the conclusion of inherency. *Id.*

The Examiner did not identify any disclosure of Csapo that inherently teaches many of the claim limitations. Those portions of claim limitations are addressed under each claim sub-heading. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson.*

3. The Examiner Did Not Consider Each Reference as a Whole and Bickley and Talbot Are Not Properly Combinable with Csapo

A reference must be considered as a whole. *In re Keller*, F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). The citations from the prior art references must be considered in the context of the teaching of the entire reference, and a rejection cannot be predicated on the mere identification in the reference of individual components of claimed limitations. *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317.

As noted in *In re Kotzab*, "most if not all inventions are a combination of old elements. Thus, every element of a claimed invention may often be found in the prior art. However, identification in the prior art of each individual part claimed is insufficient to defeat patentability of the whole claimed invention." *In re Kotzab*, *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1316.

"While the test for establishing [a] teaching, motivation, or suggestion is what the combination of [the references] would have suggested to those of ordinary skill in the art, the [statements in the references] cannot be viewed in the abstract. **Rather, they must be considered in the context of the teaching of the entire reference. Further, a rejection cannot be predicated on the mere identification in [the reference] of individual components of claimed limitations.** Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1317.

"The Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab's invention to make the combination in the manner claimed." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1318.

> In making the assessment of differences, section 103 specifically requires consideration of the claimed invention "as a whole." . . . Without this important requirement, an obviousness assessment might break an invention into its component parts (A + B + C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious. This form of hindsight reasoning, using the invention as a roadmap to find its prior art components, would discount the value of combining various existing features or principles in a new way to achieve a new result – often the very definition of invention. Section 103 precludes this hindsight discounting of the value of new combinations by requiring assessment of the invention as a whole. This court has provided further assurance of an 'as a whole' assessment of the invention under §103 by requiring a showing that an artisan of ordinary skill in the art at the time of invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would select the various elements from the prior art and combine them in the claimed manner. In other words, the examiner or court must show some suggestion or motivation, before the invention itself, to make the new combination.

Ruiz v. A.B. Chance Co., 357 F.3d at ___ 69 USPQ2d at 1690.

Bickley teaches a portable hand-held position locating radio. Talbot teaches a telescope distance measurement instrument. Csapo teaches a base station transceiver.

The Examiner did not comply with *Kotzab* and did exactly what is cautioned against in *Ruiz*. The Examiner did not consider the context of the teachings of the entire cited references. The Examiner broke the invention into component parts, pulled piece-meal teachings from multiple unrelated references, and attempted to combine and modify those teachings, all without

a suggestion to combine all three references and without a suggestion to modify the combination. The Examiner used hindsight reasoning to attempt to find prior art references that teach the component parts and combine these component parts in violation of *In re Keller, In re Kotzab,* and *Ruiz*.

4. No Reason to Combine and Modify All Three References Has Been Provided and None Exists

The Examiner first stated that there is a suggestion to combine all three references in the references themselves, i.e. for providing a stabilized local oscillator signal derived from the GPS receiver. Advisory Action, page 7, lines 18-20. However, "providing a stabilized local oscillator signal derived from the GPS receiver" is not found in any reference. There is no teaching or suggestion in any reference to modify any reference to reach the claimed limitations, and the Examiner never provided any proof that there is. There is no teaching or suggestion in any reference to combine all three references.

The Examiner next stated "see Bickley, col. 8, lines 1-19 and Talbot, Figs. 2-3 and col. 5, line 64-column 6, line 9." Advisory Action, page 7, lines 20-21. The Examiner attempted to use the theory that the motivation to combine the references is found in the references without any basis. The Examiner gave a general cite to Bickley and left it up to Appellant to try to figure out exactly how the citations motivate one skilled in the art to combine all three references and to modify the combined references multiple times in the manner suggested by the Examiner. The Examiner refused to answer the simple issue of how the cited portions suggest to one skilled in the art to combine all three references and to modify the combined references multiple times.

Instead of demonstrating a motivation to combine from one reference, the Examiner combined the references by starting with some disclosure of a base station in Csapo, selecting one citation from a telescope distance measurement instrument and using it for both a technical disclosure and a reason to combine with the base station, modifying that combination without demonstrating any suggestion, and combining the modified combination with a citation from a portable hand-held position locating radio that also is used for both a technical disclosure and a suggestion to combine. Of course, the Examiner also expects a series of technical aspects to be found inherently disclosed in the references along the way. The Examiner pulled piece meal teachings from each reference and attempted to combine them in a manner explicitly disavowed in *Ruiz*, as discussed above.

The Examiner stated "the examiner believes that the combination of Csapo, Bickley and Talbot is proper and that the reason to combine the references is to reduce long-term frequency drift of the oscillator signal, which is clearly illustrated in Fig. 2 of Talbot's references." How does this one statement found in Talbot suggest to one skilled in the art to select teachings from the base station in Csapo, select teachings from the telescope distance measurement instrument in Talbot, and select teachings from the portable hand-held position locating radio in Bickley, find teachings inherent in the references even though the Examiner states that portions of the limitation are not found in the reference, combine all three systems, and modify the three combined systems to reach Appellant's claimed limitations? It doesn't.

There is no suggestion in the Talbot citation to combine Talbot with two other references. There is no suggestion in this citation to combine Talbot with Bickley and Csapo to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper.

5. "All References Are A Communication Device" Is Not a Valid Reason to Combine

The Examiner's stated reason to combine all three of Csapo, Talbot, and Bickley is that they are all directed to a communication device. See Advisory Action, page 7, lines 9-11; Fourth Office action, page 5, lines 7-8. However, this is the same reasoning that was rejected by the *Oetiker* court. *In re Oetiker*, 977 F.2d at ___, 24 USPQ2d at 1445-1446. The Examiner's purported reason to combine all three references is not valid.

Further, the Examiner did not even mention Bickley in the Advisory Action at page 7, lines 9-11. The Examiner provided no motivation or suggestion for its combination with Csapo and Talbot.

The Examiner never explained how the Talbot citation is a motivation to combine a reference that discloses a telescope distance measurement instrument (Talbot) with a reference that discloses a portable hand-held position locating radio (Bickley) and another reference that discloses a base station transceiver (Csapo) and to modify the combined references. The teaching the Examiner provided did not suggest to one of skill in the art of Appellant's invention to combine a part of a telescope distance measurement instrument with a part of a portable hand-held position locating radio and a part of a base station and to modify that combination several times to arrive at Appellant's claimed invention.

In the Fourth Office action at page 10, lines 5-7, the Examiner stated "since it is not clear what reasoning or explanation is expected by Appellant, the details of the response from the previous action is repeated." Appellant expects a suggestion to combine and modify the three references that is legally recognizable. The Examiner did not provide one to date. To establish a *prima facie* case of obviousness, the Examiner must show some objective teaching in the prior art that would lead that individual to combine the relevant teachings of the references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

6. "All References Teach a Frequency Synthesizer" Is Not a Valid Reason to Combine

In the Fourth Office action, page 5, lines 7-8, the Examiner stated that he can combine all three references because all of the references disclose a frequency synthesizer. This simply is not a valid reason to combine all three references. This reasoning that was rejected by the *Oetiker* court. *In re Oetiker*, 977 F.2d at ___, 24 USPQ2d at 1445-1446. Moreover, Appellant's claims are not directed to a frequency synthesizer. Therefore, even if the prior art references all had taught a frequency synthesizer, it would not be relevant to Appellant's claims.

7. Upper Portion of Tower: Not Identified in Rejection and Inventor's Declaration Demonstrates the Examiner's Proposed Modification is Otherwise Erroneous

In the rejection of several claims in the Fourth Office action, the Examiner did not identify the limitations that included an upper portion of the tower or a lower portion of the tower. The Examiner did not find these limitations were found in the prior art. For example, in claim 11, the Examiner did not find "a fiber optic cable extending from approximately the upper portion of the tower to at least approximately the lower portion of the tower," "a timing source located at approximately the upper portion of the tower," "a stabilized local oscillator located at approximately the upper portion of the tower," or "an optical converting system located at approximately the upper portion of the tower." The Examiner did not address these limitations under the rejection in the Fourth Office action, and the Examiner did not address these limitations or make a further showing of proof of these limitations in the Advisory Action in a rejection. For this reason alone, Appellant submits that the Examiner did not make a *prima facie* case of obviousness in the rejection of these claims. These claims are allowable for this reason alone.

The Examiner only addressed the "upper portion of the tower" limitations in dependent claims 27, 28, 53, and 54. Regarding claims 28 and 54, the Examiner stated "since the GPS receiver of the PMU is located at a base of a tower, it is clear that Csapo as modified would disclose the GPS signal or stable timing signal is transmitted at a base of a tower as claimed." Fourth Office action, page 6, line 19-page 7, line 2. Regarding claims 27 and 53, the Examiner stated "it would have been obvious . . . to modify Csapo, Talbot, and Bickley to either locate the PMU or placing the GPS receiver at a particular position (i.e. the top) of the tower that would reduce the blockage of GPS signals caused by tall buildings, thereby generating the stable timing signal at the upper portion of the tower as claimed." Fourth Office action, page 7, lines 7-11.

In the example of claims 11 and 68, the Examiner did not provide a separate rejection in the Advisory Action under claims 11 and 68 in which the missing claim limitations were identified. The Examiner only stated "as to Applicant's argument regarding the location of the GPS (or timing source) at the upper portion of the tower, it is noted that since the GPS signal is used to provide frequency signals to both the PMU and the PRU units (see Csapo, col. 7, lines 22-26), it would be obvious to locate the GPS either at the PMU or at the PRU." Advisory Action, page 9, lines 13-17. No suggestion to modify was provided.

The Examiner also stated that "since placing the GPS receiver at the top or upper portion of the tower would generally reduce the blockage of GPS satellite signals from multiple satellites caused by surrounding tall buildings as compared to placing the GPS receiver at the bottom or lower portion of the tower as illustrated in the drawings discussed in the above 'Response to the Declaration', it would have been obvious to one skill in the art at the time the invention was made to modify Csapo to locate the GPS receiver at the top of the tower to reduce the blockage of GPS satellite signals caused by surrounding tall buildings." Advisory Action, page 9, line 17-page 10, line 2.

The Examiner's purported reason to modify the references, namely to reduce the blockage of GPS satellite signals caused by high or tall buildings, is meaningless. One skilled in the art of GPS knows that GPS signals are received from overhead satellites. The GPS receiver has a vertical line of sight to the GPS satellite. Unless the building is actually vertically over the antenna or other receiver, the building should not block the GPS signal. If the building is over the antenna or other receiver, obviously there would be no antenna or tower. See Declaration of

Inventors, attached hereto as Exhibit A. The Examiner's reason to modify Csapo to meet the claimed limitations is refuted by the evidence herein.

In response to the Declaration, the Examiner stated that the line-of-sight of a GPS receiver is changing with the position of the receiver as illustrated the drawing below. The Examiner stated that "the LOS1 of the GPS receiver at position 1 is wider than the LOS2 of the GPS located at position 2, this implies that by placing the GPS at the position 1, the GPS signals blocked by buildings would be reduced as compared to the GPS located at position 2." Advisory Action, page 2, lines 8-11.

Here, the Examiner found only that placing a GPS receiver in a special position implies an analysis. The Examiner did not find that his statement necessarily requires the modification. The Examiner did not offer actual proof.

More importantly, the Examiner imported special requirements into the cited references that 1) there must be some special requirement to receive an elevated quantity or quality of signals and, therefore, one skilled in the art has an actual need to modify the reference to reduce blockage of signals; 2) there are buildings; and 3) the buildings block the signals. The Examiner is claiming that there is a special requirement in the Csapo system such that the quantity or quality of signals received at position 2 would not be sufficient. However, Csapo does not discuss any issues with buildings or blocked signals or any reason to modify the components taught in Csapo. Thus, even if the Examiner is correct in stating the signals are partially blocked at any position, it is not relevant to any teachings of Csapo and it is not relevant to Appellant's claims.

No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. No reference discusses a special need for any elevated quantity or quality of signals.

The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal. Neither Appellant nor any cited reference specifies that a GPS signal has to be received at any special position, that any special quality or quantify of signals are required, or that there are any other special requirements.

One skilled in the art would not build an expensive and bulky structure such as a tower if there was not a special requirement to receive a special elevated quantity or quality of signals. It

is difficult to obtain permits to build communication towers, permits may not always be available, generally an area for a tower is leased or some other fee is paid, the tower itself is expensive to build and operate, and a company must comply with many other ordinances and laws to build and operate such a tower. As Appellant pointed out, companies are always trying to save money and would not build a tower unless required. "A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1316.

These are all evidence and secondary considerations why one skilled in the art would NOT build a tower. The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors. The Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references, and the Examiner imported special requirements into the cited references in an attempt to further modify the teachings in the references to meet the claimed limitations. One skilled in the art would not modify the cited references as stated by the Examiner without that special requirement.

Neither Appellants claims nor any cited reference teaches or suggests that a special quantity or any quantity of signals is required or received. Appellant's claims only require one GPS signal to be received. It is not relevant to Appellant's claims or to any cited reference whether one or multiple GPS signals are received or whether a GPS signal is received at any particular position, such as position 1 or position 2, or from any one or more of the GPS satellites.

8. The Proposed Combination and Modification Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127. A change in the mode of operation of a device that renders the device inoperative for its stated utility as set forth in the cited reference renders the reference improper for use to support an obviousness-type rejection based on such a change. See *Diamond International Corp. v. Walterhoefer*, 289 F.Supp at ___, 159 USPQ at 460-461; *Ex parte Weber*, 154 USPQ at 192. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the

first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

Moreover, if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352.

In the Fourth Office action at pages 7, lines 3-11 and page 12, lines 4-8, the Examiner stated that it would be obvious to add a tower to Bickley, Talbot, and Csapo to meet the claimed limitations. In the Advisory Action at page 9, lines 12-17, the Examiner maintained the rejection but claimed it would be obvious to locate a GPS either at the PMU or at the PRU. In this portion of the Advisory Action, the Examiner did not further specify any reasons for combining Bickley, Talbot, and Csapo and adding a tower and a GPS receiver at an upper portion of the tower in the Advisory Action, and the Examiner did not give a reason to modify the combined Bickley, Talbot, and Csapo systems to add a tower and a GPS receiver at an upper portion of the tower, other than stating "since the GPS signal is used to provide frequency signals to both the PM and the PRU units (see Csapo, col. 7, lines 22-26), it would have been obvious to locate the GPS either at the PMU or at the PRU." Advisory Action, page 9, lines 12-17.

In the Fourth Office action at page 5, lines 14-22 and page 12, lines 9-16, the Examiner stated that it would be obvious to modify Bickley, Talbot, and Csapo to receive MMDS communications. In the Advisory Action at page 8, line 17-page 9, line 11, the Examiner maintained the rejection.

(a) "Tower" Limitations

It is meaningless to say that Bickley would be modified to include a tower. Bickley is a portable hand-held position locating radio. There is no tower, and there is no reason to have a tower. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose. A user of the Bickley system cannot have a tower attached to its device. The Bickley device would no longer be portable or hand-held. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127. Moreover, Bickley does not speak of buildings or any need to reduce or eliminate blockage of any signals whatsoever.

It is equally meaningless to say Talbot would move a GPS receiver to the top of a tower for any reason. Talbot does not teach a tower. Talbot discloses a distance measurement instrument for a telescope. Talbot does not speak of buildings or any need to reduce or eliminate blockage of any signals whatsoever. Where would one skilled in the art of telescopes locate the telescope of the Talbot system? Would such a telescope system be located in the midst of tall buildings where the user could not use the telescope. It is doubtful. Adding a tower to Talbot would not only serve no purpose, it might disable the servo-function of the telescope. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

It is meaningless to say Csapo would move its PMU (mobile unit) to the top of a tower, as claimed by the Examiner in the Fourth Office action at page 12, lines 4-8. Csapo would not work. Csapo would then have both the PRU (radio unit) and the PMU co-located. There would be no main unit and no separate radio unit, which is explicitly taught in Csapo. See Figure 9. Csapo would no longer be able to have multiple PRUs and one PMU as taught by Figure 11. The Examiner's proposed modification would make the Csapo system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127. Moreover, Csapo does not speak of buildings or any need to reduce or eliminate blockage of any signals whatsoever.

(b) "MMDS" Limitations

It also is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

Moreover, it is equally meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. It is a far stretch to say Talbot would be modified to add an entire infrastructure to transmit and receive MMDS signals, such as for a base station system. It would be an entirely

different system. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

The Examiner did not provide any proof that the system of Csapo can even be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

9. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant pointed out to the Examiner that the references do not teach multipoint multichannel distribution service (MMDS) based communication signals. The Examiner stated that "since MMDS signal is just a high frequency signal (1.7-2.7 GHz) that provides a platform for providing services such as broadband data, voice, video and high-speed internet access (see specification page 6, lines 12-19) and is well known in the art, and since Csapo discloses a base station communicating with a plurality of mobile stations utilizing a plurality of signal protocols and can operate on various frequencies (see Abstract and col. 8, lines 48-55), it would have been obvious . . . to modify Csapo for providing the base station with MMDS capability for communicating to mobile or fixed facilities . . . for expanding enhanced services in order to fulfill customer needs." Advisory Action, page 8, line 19-page 9, line 6. "Here, the reason to modify Csapo to provide MMDS capability to the base station is expand services (i.e. provide TV, video or high speed LAN access) of the base station, thereby fulfilling customer needs." Advisory Action, page 9, lines 7-10.

According to the Examiner, the need to expand services such as TV and video is a reason to modify for one skilled in the art, and this reason fulfills the requirements of *Oetiker*, the Federal Circuit law, and the Board's decisions. According to this theory, everything invented in the telecommunications industry after the telegraph would not be patentable. The telephone was invented to expand services to enable voice communication. Wireless technologies were invented to expand services over purely wireline systems. Fiber optic systems were invented to

create higher bandwidth, and thereby expand services. According to the Examiner's stated reason to modify Csapo, none of these systems are patentable.

Appellant submits that this stated reason is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references" and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations. At least, Appellant did not locate one.

The Examiner stated that because the MMDS is only recited in the preamble, it is given very little patentable weight. Advisory Action, page 9, lines 10-11. The Examiner did not cite any portion of the MPEP or any Federal Circuit case or Board decision for the proposition that he can ignore this MMDS limitation. Quite simply, none exists. A claim preamble may include a limitation where the preamble is used to define the subject matter of the claimed invention. *NTP, Inc. v. Research in Motion, Ltd.*, 392 F.3d at ___, 73 USPQ2d at1247; *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d at ___, 34 USPQ2d at 1821.

The MMDS terminology limits the structure of the claimed invention. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d at 1257, 9 USPQ2d at 1966.

The Examiner must find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

10. The Examiner Used Appellant's Teachings Against it in a Hindsight Analysis

The Examiner used improper hindsight to reconstruct Appellant's claims. Figure 2 of Talbot shows a graph of short-term variations, long-term drift, and GPS-corrected long-term drift.

Talbot discloses a telescope distance measurement instrument. Talbot does not provide any "motivation" or suggestion to combine its teachings with two other unrelated references. Talbot does not teach all of Appellant's claim limitations, and a graph showing drift rates does not provide a motivation to combine all three references.

The Examiner did not state that he found a motivation to combine all three references to meet the claimed limitations and to modify the combined references. Basically, the Examiner just stated that Talbot teaches using a GPS signal to reduce frequency drift. This is clear error.

The Examiner did exactly what is cautioned against in *Ruiz* and *Oetiker*. The Examiner broke the invention into component parts and then attempted to find prior art references that teach the component parts. The Examiner provided a single citation for one of the component parts and for the "motivation" to combine all three references. The Examiner never provided a motivation to combine all three references and to modify the combined references, as explained above. Appellant has shown that all of the component parts are NOT shown in the prior art. Appellant has further shown that, even if one thinks all of the component parts are shown in the prior art, the Examiner did not provide a motivation to combine all three references and to modify the combined references to reach the claimed limitations. The Examiner reconstructed Appellant's invention only with the benefit of hindsight. This is insufficient to present a *prima facie* case of obviousness.

11. The Examiner Incorrectly Identified the "State of the Art"

The Examiner stated that "in the knowledge generally available to one of the ordinary skill of satellites, it would have been obvious to one skill [sic] in the art at the time the invention was made to modify Csapo, Talbot, and Bickley to either locate the PMU or placing the GPS receiver at a particular position (i.e. the top) of the tower that would reduce the blockage of GPS satellite signals caused by high or tall buildings." See Fourth Office action, Page 12, lines 4-8. Appellant's claims are not directed to satellites. While some of the references cited by the Examiner have GPS components, Appellant does not agree that the references cited by the Examiner or the Appellant's claims are in the art of "satellites." Therefore, the combination asserted by the Examiner is improper.

12. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. The Examiner failed to review or even acknowledge the secondary considerations. See for example, Response to Provoke Advisory Action, page 13, line 17-page 14, line 17.

Evidence in the Application shows that the Examiner's purported reasons to modify the cited references was not correct, was not supported by the evidence, and was, in fact, not a reason to modify the references. Evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d at ___, 218 USPQ at 879; *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d at ___, 231 USPQ at 90.

Evidence of non-obviousness and secondary considerations are found in the application itself. There was a great need that was unfulfilled in the MMDS systems. The MMDS systems used towers with heavy cable. Because the transmission lines typically are thick, they place a heavy load on the tower. The heavy load of the thick transmission line limits the number of transmission lines that can be placed on the tower, thereby limiting the number of communication signals that can be carried between the antenna and the base of the towers. See Application, page 4, lines 3-7.

The MMDS systems did not use fiber. Due to the invention, the towers are now lighter and can sustain more antennas. See Application, page 4, lines 16-19. The invention was an advance in the art that led to cost savings in the equipment. See Application, page 5, lines 13-15.

The mid and upper portions of the towers typically have electrical interference created by electrical storms, radio frequency (RF) interference created by other communication signals, or other electrical, electromagnetic, and/or RF interference (herein, electrical interference). This interference can penetrate the components at the mid or upper portion or the base of the communication system, and interference or noise can ingress into the communication system. See Application, page 5, lines 16-21.

Because fiber optic cable is used to transmit the communication signals between the antenna and the base of the tower, the components at the mid or upper portion of the tower are electrically isolated from the components at the base of the tower. Thus, electrical interference at the mid and upper portions of the tower will have little, if any, effect on components at the

base of the tower or the communication signals being transmitted. This results in improvement in the quality of the communication signals being received at the base of the towers. See Application, page 5, line 22-page 6, line 7.

In addition, the wireless communication systems of the present invention use a stable timing signal, such as a global positioning system (GPS) timing signal or another stable timing signal, to stabilize a local oscillator in a low noise block converter (LNB). The stable timing signal enables the LNB to output a more stable communication signal that has less drift and, therefore, has increased quality. See Application, page 6, lines 8-12.

This evidence of secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d at ___, 218 USPQ at 879; *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d at ___, 231 USPQ at 90. This evidence of secondary considerations demonstrates that the claimed invention is not obvious over the cited references alone or in combination.

13. Claim Terms Are to be Construed in Light of the Specification

"When examining claims for patentability, claims are interpreted as broadly as is reasonable and consistent with the specification." *In re Thrift*, 298 F.3d at ___, 63 USPQ2d at 2006; *In re Hyatt*, 211 F.3d at 1372, 54 USPQ2d at1667. The Examiner alleged that the Appellant attempted to read limitations from the specification into the claims. Appellant is not requesting, and specifically does not want, limitations from the specification to be read into the claims. Reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification to narrow the claim. *In re Prater*, 415 F.2d at 1404-05, 162 USPQ at 550. The Examiner ignored Appellant's request to read the claims in light of the specification and to interpret limitations recited in the claims.

14. Summary of Advisory Action Issues

In order to agree with the Examiner, one would have to conclude the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency

synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently, 10) all of the foregoing combinations and modifications and inherently disclosed limitations can be combined with Talbot without a suggestion to combine all three of the references and without a suggestion to make all of the modifications, and 11) for claim limitations identifying a portion of a tower, the Examiner can modify all of the foregoing without a reason to modify and in opposition to all evidence and the Declaration presented by Appellant. This is a tall order.

15. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests many of the claimed limitations, regardless of whether or not the Examiner's arguments are accepted. Those limitations are identified under each claim sub-heading.

Claims 11-13

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action. The Examiner attempted to resolve this issue in the Advisory Action. See pages Advisory Action, 3-4. However, the Examiner merely identified a

communication tower, an antenna, a block converter, a fiber optic transmitter, a fiber receiver, a converting system configured to convert a communication signal to a lower frequency signal and to convert the lower frequency signal to an optical signal and to transmit the optical signal to an optical receiving system, a timing source, a GPS receiver, amplifiers, and a filter. The Examiner did not identify each portion of each claim limitation.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a timing source located at approximately the upper portion of the tower and configured to receive a stable timing source signal and to transmit a stable timing source based stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

In the Advisory Action at page 3, line 18, the Examiner found that "a block converter" is inherently disclosed at column 4, lines 43-50. See Advisory Action, page 3. However, the Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about the inherency of the block converter limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

In the Advisory Action on page 4, lines 9-11, the examiner found that "a converting system configured to convert a communication signal to a lower frequency signal, and to convert the lower frequency signal to an optical signal and to transmit the optical signal to an optical receiving system" is inherently disclosed by Csapo at column 4, lines 43-50 and column 6, lines

55-59. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "an optical converting system located at approximately the upper portion of the tower and configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over the fiber optic cable from approximately the upper portion of the tower" was inherently disclosed at column 4, lines 43-50 and column 6, lines 55-59. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "a stabilized local oscillator located at approximately the upper portion of the tower configured to receive the stable timing source based stable timing signal and to use the stable timing source based stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently, 10) all of the foregoing combinations and modifications and inherently disclosed limitations can be combined with Talbot without a suggestion to combine all three of the references and all of the modifications, and 11) for claim limitations identifying a

portion of a tower (which include this claim 11), the Examiner can modify all of the foregoing without a reason to modify and in opposition to all evidence and the Declaration presented by Appellant. See Advisory Action, page 4, line 21-page 6, line 22.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

In the Advisory Action at page 3, line 16, the examiner found that "a communication tower" is disclosed in Figure 9. The Examiner did not identify each portion of the limitation in the rejection and did not find "a tower having an upper portion and a lower portion" was disclosed in Figure 9. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

In the Advisory Action at page 3, line 17, the examiner found that "an antenna" was disclosed in Figure 9, reference 120. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "an antenna configured to receive the communication signal at a frequency" was disclosed in Figure 9, reference 120. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d at 1534, 28 USPQ2d at 1957. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d at 745, 49 USPQ2d at 1950-51. In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy,* 17 USPQ2d at 1464. The examiner must provide objective evidence to support the conclusion of inherency. *Id.*

The entire "block converter" limitation is not inherently disclosed in Csapo. The limitation requires "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal." This limitation requires using a stabilized local oscillator signal to convert the communication signal from the frequency to a stable lower frequency. Csapo does not teach or suggest using a stabilized local oscillator signal for anything. The Examiner admitted as such in the Advisory Action at page 4, lines 20-21. Therefore, this "block converter" claim limitation cannot possibly be inherently disclosed in Csapo.

It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter claim limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about how the entire "block converter" limitation is inherently disclosed in Csapo. The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Further, the Examiner did not compare the entire claim limitation of "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal" to any inherency rejection. He merely stated that a "stabilizing system" is inherently disclosed. The Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, and 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find this limitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Csapo does not inherently disclose "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

In the Advisory Action, at page 4, lines 1-4, the Examiner stated that a fiber optic receiver and a fiber optic transmitter were inherently disclosed in Csapo at column 6, lines 55-59, wherein it is clear that in order to provide an optical signal, an optical/electrical conversion and an optic transmitter-receiver should be used.

However, the Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation was inherent in Csapo. Specifically, the claim limitations for claim 11 are the following: "a fiber optic cable extending from approximately the upper portion of the tower to at least approximately the lower portion of the tower" and "an optical receiving system configured to receive the optical signal over the fiber optic cable." The Examiner did not find that the entire limitations were inherent.

It is not inherent in Csapo that any specific type of signal is converted at any point in time with any particular equipment. Csapo speaks specifically about coaxial cable. Csapo states, for example, that all wires and coaxial cables may be bundled into a single polymer jacket. Thus, a single multi-wire/coaxial connector is used at both ends of the cable. The resulting cable is typically built as a unitary item which provides ease of installation and repair in the field. Thus, the cable diameter may easily be kept under 0.75 inches. Csapo, column 9, lines 43-48. Coaxial cables coming into PRU are transformer coupled to the transceiver, which eliminates the possibility of ground loops (and their corresponding ground noise), and ensures that the PRU can be placed up to and in excess of 150 feet away from PMU. Csapo, column 9, lines 43-55.

Csapo only mentions optical cabling in one location in passing. Csapo merely states that the wires can include optical cabling between the PMU and the PRU. Csapo, column 6, lines 55-59. Appellant asserts that the entire limitations for "a fiber optic cable extending from approximately the upper portion of the tower to at least approximately the lower portion of the tower" and "an optical receiving system configured to receive the optical signal over the fiber optic cable" are not inherently disclosed in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

It is not inherent in Csapo that "an optical converting system located at approximately the upper portion of the tower and configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over the fiber optic cable from approximately the upper portion of the tower." The Examiner did not identify any portion of Csapo that inherently teaches converting a lower frequency signal to an optical signal. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the

determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Combine and Modify All Three References Has Been Provided and None Exists

The Examiner first stated that there is a suggestion to combine all three references in the references themselves, i.e. for providing a stabilized local oscillator signal derived from the GPS receiver. Advisory Action, page 7, lines 18-20. However, "providing a stabilized local oscillator signal derived from the GPS receiver" is not found in any reference. There is no teaching or suggestion in any reference to modify any reference to reach the claimed limitations, and the Examiner never provided any proof that there is. There is no teaching or suggestion in any reference to combine all three references.

The Examiner next stated "see Bickley, col. 8, lines 1-19 and Talbot, Figs. 2-3 and col. 5, line 64-column 6, line 9." Advisory Action, page 7, lines 20-21. The Examiner attempted to use the theory that the motivation to combine the references is found in the references without any basis. The Examiner gave a general cite to Bickley and left it up to Appellant to try to figure out exactly how the citations motivate one skilled in the art to combine all three references and to modify the combined references multiple times in the manner suggested by the Examiner. The Examiner refused to answer the simple issue of how the cited portions suggest to one skilled in the art to combine all three references and to modify the combined references multiple times.

Instead of demonstrating a motivation to combine from one reference, the Examiner combined the references by starting with some disclosure of a base station in Csapo, selecting one citation from a telescope distance measurement instrument and using it for both a technical disclosure and a reason to combine with the base station, modifying that combination without demonstrating any suggestion, and combining the modified combination with a citation from a portable hand-held position locating radio that also is used for both a technical disclosure and a suggestion to combine. Of course, the Examiner also expects a series of technical aspects to be found inherently disclosed in the references along the way. The Examiner pulled piece meal teachings from each reference and attempted to combine them in a manner explicitly disavowed in *Ruiz*, as discussed above.

The Examiner stated "the examiner believes that the combination of Csapo, Bickley and Talbot is proper and that the reason to combine the references is to reduce long-term frequency drift of the oscillator signal, which is clearly illustrated in Fig. 2 of Talbot's references." How does this one statement found in Talbot suggest to one skilled in the art to select teachings from the base station in Csapo, select teachings from the telescope distance measurement instrument in Talbot, and select teachings from the portable hand-held position locating radio in Bickley, find teachings inherent in the references even though the Examiner states that portions of the limitation are not found in the reference, combine all three systems, and modify the three combined systems to reach Appellant's claimed limitations? It doesn't.

There is no suggestion in the Talbot citation to combine Talbot with two other references. There is no suggestion in this citation to combine Talbot with Bickley and Csapo to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper.

4. Upper Portion of Tower: Not Identified in Rejection and Inventor's Declaration Demonstrates the Examiner's Proposed Modification is Otherwise Erroneous

In the rejection of claim 11 in the Fourth Office action, the Examiner did not identify the limitations that included an upper portion of the tower or a lower portion of the tower. The Examiner did not find these limitations were found in the prior art. For example, the Examiner did not find "a fiber optic cable extending from approximately the upper portion of the tower to at least approximately the lower portion of the tower," "a timing source located at approximately the upper portion of the tower," "a stabilized local oscillator located at approximately the upper portion of the tower," or "an optical converting system located at approximately the upper portion of the tower." The Examiner did not address these limitations of claim 11 under the rejection in the Fourth Office action, and the Examiner did not address these limitations or make a further showing of proof of these limitations in the Advisory Action in a rejection of claim 11. For this reason alone, Appellant submits that the Examiner did not make a *prima facie* case of obviousness in the rejection of claim 11. Claim 11 is allowable for this reason alone.

The Examiner only addressed the "upper portion of the tower" limitations in dependent claims 27, 28, 53, and 54. Regarding claims 28 and 54, the Examiner stated "since the GPS receiver of the PMU is located at a base of a tower, it is clear that Csapo as modified would

disclose the GPS signal or stable timing signal is transmitted at a base of a tower as claimed." Fourth Office action, page 6, line 19-page 7, line 2. Regarding claims 27 and 53, the Examiner stated "it would have been obvious . . . to modify Csapo, Talbot, and Bickley to either locate the PMU or placing the GPS receiver at a particular position (i.e. the top) of the tower that would reduce the blockage of GPS signals caused by tall buildings, thereby generating the stable timing signal at the upper portion of the tower as claimed." Fourth Office action, page 7, lines 7-11.

In the Advisory Action, the Examiner did not provide a separate rejection under claims 11 and 68 in which the missing claim limitations were identified. The Examiner only stated "as to Applicant's argument regarding the location of the GPS (or timing source) at the upper portion of the tower, it is noted that since the GPS signal is used to provide frequency signals to both the PMU and the PRU units (see Csapo, col. 7, lines 22-26), it would be obvious to locate the GPS either at the PMU or at the PRU." Advisory Action, page 9, lines 13-17. No suggestion to modify was provided.

The Examiner also stated that "since placing the GPS receiver at the top or upper portion of the tower would generally reduce the blockage of GPS satellite signals from multiple satellites caused by surrounding tall buildings as compared to placing the GPS receiver at the bottom or lower portion of the tower as illustrated in the drawings discussed in the above 'Response to the Declaration', it would have been obvious to one skill in the art at the time the invention was made to modify Csapo to locate the GPS receiver at the top of the tower to reduce the blockage of GPS satellite signals caused by surrounding tall buildings." Advisory Action, page 9, line 17-page 10, line 2.

The Examiner's purported reason to modify the references, namely to reduce the blockage of GPS satellite signals caused by high or tall buildings, is meaningless. One skilled in the art of GPS knows that GPS signals are received from overhead satellites. The GPS receiver has a vertical line of sight to the GPS satellite. Unless the building is actually vertically over the antenna or other receiver, the building should not block the GPS signal. If the building is over the antenna or other receiver, obviously there would be no antenna or tower. See Declaration of Inventors, attached hereto as Exhibit A. The Examiner's reason to modify Csapo to meet the claimed limitations is refuted by the evidence herein.

In response to the Declaration, the Examiner stated that the line-of-sight of a GPS receiver is changing with the position of the receiver as illustrated the drawing below. The

Examiner stated that "the LOS1 of the GPS receiver at position 1 is wider than the LOS2 of the GPS located at position 2, this implies that by placing the GPS at the position 1, the GPS signals blocked by buildings would be reduced as compared to the GPS located at position 2." Advisory Action, page 2, lines 8-11.

Here, the Examiner found only that placing a GPS receiver in a special position implies an analysis. The Examiner did not find that his statement necessarily requires the modification. The Examiner did not offer actual proof.

More importantly, the Examiner imported special requirements into the cited references that 1) there must be some special requirement to receive an elevated quantity or quality of signals and, therefore, one skilled in the art has an actual need to modify the reference to reduce blockage of signals; 2) there are buildings; and 3) the buildings block the signals. The Examiner is claiming that there is a special requirement in the Csapo system such that the quantity or quality of signals received at position 2 would not be sufficient. However, Csapo does not discuss any issues with buildings or blocked signals or any reason to modify the components taught in Csapo. Thus, even if the Examiner is correct in stating the signals are partially blocked at any position, it is not relevant to any teachings of Csapo and it is not relevant to Appellant's claims.

No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. No reference discusses a special need for any elevated quantity or quality of signals.

The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal. Neither Appellant nor any cited reference specifies that a GPS signal has to be received at any special position, that any special quality or quantify of signals are required, or that there are any other special requirements.

One skilled in the art would not build an expensive and bulky structure such as a tower if there was not a special requirement to receive a special elevated quantity or quality of signals. It is difficult to obtain permits to build communication towers, permits may not always be available, generally an area for a tower is leased or some other fee is paid, the tower itself is expensive to build and operate, and a company must comply with many other ordinances and laws to build and operate such a tower. As Appellant pointed out, companies are always trying to save money

and would not build a tower unless required. "A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1316.

These are all evidence and secondary considerations why one skilled in the art would NOT build a tower. The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors. The Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references, and the Examiner imported special requirements into the cited references in an attempt to further modify the teachings in the references to meet the claimed limitations. One skilled in the art would not modify the cited references as stated by the Examiner without that special requirement.

Neither Appellants claims nor any cited reference teaches or suggests that a special quantity or any quantity of signals is required or received. Appellant's claims only require one GPS signal to be received. It is not relevant to Appellant's claims or to any cited reference whether one or multiple GPS signals are received or whether a GPS signal is received at any particular position, such as position 1 or position 2, or from any one or more of the GPS satellites.

5. The Proposed Combination and Modification Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

(a) "Tower" Limitations

It is meaningless to say that Bickley would be modified to include a tower. Bickley is a portable hand-held position locating radio. There is no tower, and there is no reason to have a tower. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose.

It is equally meaningless to say Talbot would move a GPS receiver to the top of a tower for any reason. Talbot does not teach a tower. Talbot discloses a distance measurement instrument for a telescope. Adding a tower to Talbot would not only serve no purpose, it might disable the servo-function of the telescope.

It is meaningless to say Csapo would move its PMU (mobile unit) to the top of a tower, as claimed by the Examiner in the Fourth Office action at page 12, lines 4-8. Csapo would not work. Csapo would then have both the PRU (radio unit) and the PMU co-located. There would be no main unit and no separate radio unit, which is explicitly taught in Csapo. See Figure 9. Csapo would no longer be able to have multiple PRUs and one PMU as taught by Figure 11.

(b) "MMDS" Limitations

It is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals.

It is equally meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. Talbot would have to be modified to add an entire infrastructure to transmit and receive MMDS signals and would be an entirely different system.

The Examiner did not provide any proof that the system of Csapo can be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. MMDS is not used along with any of the protocols disclosed in Csapo, and there is no evidence to suggest the Csapo system would work with the MMDS protocol.

The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

6. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant submits that the Examiner's stated reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations is not sufficient to meet the

requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

The Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's rejection of this claim must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations.

The Examiner stated that because the MMDS is only recited in the preamble, it is given very little patentable weight. Advisory Action, page 9, lines 10-11. A claim preamble may include a limitation where the preamble is used to define the subject matter of the claimed invention. (*Citations omitted.*) The MMDS terminology limits the structure of the claimed invention. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. (*Citations omitted.*) The Examiner must find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. That includes the MMDS limitation.

(The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

7. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

8. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source located at approximately the upper portion of the tower and configured to receive a stable timing source signal and to transmit a stable timing source based stable timing signal; b) a stabilized local oscillator located at approximately the upper portion of the tower configured to receive the stable timing source based stable timing signal and to use the stable timing source based stable timing signal as an input to generate a stabilized oscillator signal; c) a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal; or d) an optical converting system located at approximately the upper portion of the tower and configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over the fiber optic cable from approximately the upper portion of the tower. No combination of cited references discloses, teaches, or suggests the limitations as to a location of the claimed components on the tower.

Claim 68

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action.

The Examiner attempted to resolve this issue in the Advisory Action. See pages Advisory Action, 3-4. However, the Examiner merely identified a communication tower, an antenna, a block converter, a fiber optic transmitter, a fiber receiver, a converting system configured to convert a communication signal to a lower frequency signal and to convert the lower frequency signal to an optical signal and to transmit the optical signal to an optical receiving system, a timing source, a GPS receiver, amplifiers, and a filter. The Examiner did not identify each portion of each claim limitation.

In the Advisory Action at page 3, line 16, the examiner found that "a communication tower" is disclosed in Figure 9. The Examiner did not identify each portion of the limitation in the rejection and did not find "receiving the communication signal at a receiving frequency at approximately an upper portion of a communication tower" was disclosed in Figure 9. The

Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "receiving a global positioning system signal at approximately the upper portion of the communication tower and using the global positioning system signal to generate a global positioning system based stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal" was inherently disclosed. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. While this does not read on the above method claim limitation, it does provide evidence that the above method claim limitation is not found in the cited references.

For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another

teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently, 10) all of the foregoing combinations and modifications and inherently disclosed limitations can be combined with Talbot without a suggestion to combine all three of the references and all of the modifications, and 11) for claim limitations identifying a portion of a tower (which include this claim 68), the Examiner can modify all of the foregoing without a reason to modify and in opposition to all evidence and the Declaration presented by Appellant. See Advisory Action, page 4, line 21-page 6, line 22.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

In the Advisory Action on page 4, lines 9-11, the examiner found that "a converting system configured to convert a communication signal to a lower frequency signal, and to convert the lower frequency signal to an optical signal and to transmit the optical signal to an optical receiving system" is inherently disclosed by Csapo at column 4, lines 43-50 and column 6, lines 55-59. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "converting the receiving frequency of communication signal to a stable lower frequency using the stabilized local oscillator signal" was inherently disclosed at column 4, lines 43-50 and column 6, lines 55-59. The Examiner disregarded the remaining

portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d at 1534, 28 USPQ2d at 1957. To establish inherency, the extrinsic evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d at745, 49 USPQ2d at 1950-51. In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art. *Ex parte Levy,* 17 USPQ2d at1464. The examiner must provide objective evidence to support the conclusion of inherency. *Id.*

The Examiner found that providing "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. The Examiner stated that a block converter was inherently disclosed in Csapo at column 4, lines 43-50. See Advisory Action, page 3, line 18.

The Examiner did not actually compare the claim limitations of the method claims to the references. The Examiner did not compare the claim limitation "receiving a global positioning system signal at approximately the upper portion of the communication tower and using the global positioning system signal to generate a global positioning system based stable timing signal" to any inherency rejection. The Examiner did not compare "receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal" to any inherency rejection. Also, the Examiner did not compare the claim limitation "converting the receiving frequency of communication signal to a stable lower frequency using the stabilized local

oscillator signal" to any inherency rejection. He merely stated that a "stabilizing system" and a "block converter" are inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitations are inherently disclosed. Since the above limitations were not found to be inherently or explicitly disclosed, the Examiner did not make a *prima facie* case of obviousness.

While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, and 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find this limitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed.

In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Csapo does not inherently disclose "receiving a global positioning system signal at approximately the upper portion of the communication tower and using the global positioning system signal to generate a global positioning system based stable timing signal," "receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal," or "converting the receiving frequency of communication signal to a stable lower frequency using the stabilized local oscillator signal." The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Combine and Modify All Three References Has Been Provided and None Exists

The Examiner first stated that there is a suggestion to combine all three references in the references themselves, i.e. for providing a stabilized local oscillator signal derived from the GPS receiver. Advisory Action, page 7, lines 18-20. However, "providing a stabilized local oscillator signal derived from the GPS receiver" is not found in any reference. There is no teaching or suggestion in any reference to modify any reference to reach the claimed limitations, and the Examiner never provided any proof that there is. There is no teaching or suggestion in any reference to combine all three references.

The Examiner next stated "see Bickley, col. 8, lines 1-19 and Talbot, Figs. 2-3 and col. 5, line 64-column 6, line 9." Advisory Action, page 7, lines 20-21. The Examiner attempted to use the theory that the motivation to combine the references is found in the references without any basis. The Examiner gave a general cite to Bickley and left it up to Appellant to try to figure out exactly how the citations motivate one skilled in the art to combine all three references and to modify the combined references multiple times in the manner suggested by the Examiner. The Examiner refused to answer the simple issue of how the cited portions suggest to one skilled in the art to combine all three references and to modify the combined references multiple times.

Instead of demonstrating a motivation to combine from one reference, the Examiner combined the references by starting with some disclosure of a base station in Csapo, selecting one citation from a telescope distance measurement instrument and using it for both a technical disclosure and a reason to combine with the base station, modifying that combination without demonstrating any suggestion, and combining the modified combination with a citation from a portable hand-held position locating radio that also is used for both a technical disclosure and a suggestion to combine. Of course, the Examiner also expects a series of technical aspects to be found inherently disclosed in the references along the way. The Examiner pulled piece meal teachings from each reference and attempted to combine them in a manner explicitly disavowed in *Ruiz*, as discussed above.

The Examiner stated "the examiner believes that the combination of Csapo, Bickley and Talbot is proper and that the reason to combine the references is to reduce long-term frequency drift of the oscillator signal, which is clearly illustrated in Fig. 2 of Talbot's references." How does this one statement found in Talbot suggest to one skilled in the art to select teachings from the base station in Csapo, select teachings from the telescope distance measurement instrument in Talbot, and select teachings from the portable hand-held position locating radio in Bickley, find teachings inherent in the references even though the Examiner states that portions of the limitation are not found in the reference, combine all three systems, and modify the three combined systems to reach Appellant's claimed limitations? It doesn't.

There is no suggestion in the Talbot citation to combine Talbot with two other references. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to modify the combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper.

4. Upper Portion of Tower: Not Identified in Rejection and Inventor's Declaration Demonstrates the Examiner's Proposed Modification is Otherwise Erroneous

In the rejection of claim 68 in the Fourth Office action, the Examiner did not identify the limitations that included an upper portion of the tower or a lower portion of the tower. The Examiner did not find these limitations were found in the prior art. For example, the Examiner did not find "receiving the communication signal at a receiving frequency at approximately an upper portion of a communication tower," "receiving a global positioning system signal at

approximately the upper portion of the communication tower," and "receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower." The Examiner did not address these limitations of claim 68 under the rejection in the Fourth Office action, and the Examiner did not address these limitations or make a further showing of proof of these limitations in the Advisory Action in a rejection of claim 68. For this reason alone, Appellant submits that the Examiner did not make a *prima facie* case of obviousness in the rejection of claim 68. Claim 68 is allowable for this reason alone.

The Examiner only addressed the "upper portion of the tower" limitations in dependent claims 27, 28, 53, and 54. Regarding claims 28 and 54, the Examiner stated "since the GPS receiver of the PMU is located at a base of a tower, it is clear that Csapo as modified would disclose the GPS signal or stable timing signal is transmitted at a base of a tower as claimed." Fourth Office action, page 6, line 19-page 7, line 2. Regarding claims 27 and 53, the Examiner stated "it would have been obvious . . . to modify Csapo, Talbot, and Bickley to either locate the PMU or placing the GPS receiver at a particular position (i.e. the top) of the tower that would reduce the blockage of GPS signals caused by tall buildings, thereby generating the stable timing signal at the upper portion of the tower as claimed." Fourth Office action, page 7, lines 7-11.

In the Advisory Action, the Examiner did not provide a separate rejection under claims 11 and 68 in which the missing claim limitations were identified. The Examiner only stated "as to Applicant's argument regarding the location of the GPS (or timing source) at the upper portion of the tower, it is noted that since the GPS signal is used to provide frequency signals to both the PMU and the PRU units (see Csapo, col. 7, lines 22-26), it would be obvious to locate the GPS either at the PMU or at the PRU." Advisory Action, page 9, lines 13-17. No suggestion to modify was provided.

The Examiner also stated that "since placing the GPS receiver at the top or upper portion of the tower would generally reduce the blockage of GPS satellite signals from multiple satellites caused by surrounding tall buildings as compared to placing the GPS receiver at the bottom or lower portion of the tower as illustrated in the drawings discussed in the above 'Response to the Declaration', it would have been obvious to one skill in the art at the time the invention was made to modify Csapo to locate the GPS receiver at the top of the tower to reduce the blockage

of GPS satellite signals caused by surrounding tall buildings." Advisory Action, page 9, line 17-page 10, line 2.

The Examiner's purported reason to modify the references, namely to reduce the blockage of GPS satellite signals caused by high or tall buildings, is meaningless. One skilled in the art of GPS knows that GPS signals are received from overhead satellites. The GPS receiver has a vertical line of sight to the GPS satellite. Unless the building is actually vertically over the antenna or other receiver, the building should not block the GPS signal. If the building is over the antenna or other receiver, obviously there would be no antenna or tower. See Declaration of Inventors, attached hereto as Exhibit A. The Examiner's reason to modify Csapo to meet the claimed limitations is refuted by the evidence herein.

In response to the Declaration, the Examiner stated that the line-of-sight of a GPS receiver is changing with the position of the receiver as illustrated the drawing below. The Examiner stated that "the LOS1 of the GPS receiver at position 1 is wider than the LOS2 of the GPS located at position 2, this implies that by placing the GPS at the position 1, the GPS signals blocked by buildings would be reduced as compared to the GPS located at position 2." Advisory Action, page 2, lines 8-11.

Here, the Examiner found only that placing a GPS receiver in a special position implies an analysis. The Examiner did not find that his statement necessarily requires the modification. The Examiner did not offer actual proof.

More importantly, the Examiner imported special requirements into the cited references that 1) there must be some special requirement to receive an elevated quantity or quality of signals and, therefore, one skilled in the art has an actual need to modify the reference to reduce blockage of signals; 2) there are buildings; and 3) the buildings block the signals. The Examiner is claiming that there is a special requirement in the Csapo system such that the quantity or quality of signals received at position 2 would not be sufficient. However, Csapo does not discuss any issues with buildings or blocked signals or any reason to modify the components taught in Csapo. Thus, even if the Examiner is correct in stating the signals are partially blocked at any position, it is not relevant to any teachings of Csapo and it is not relevant to Appellant's claims.

No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. No reference discusses a special need for any elevated quantity or quality of signals.

The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal. Neither Appellant nor any cited reference specifies that a GPS signal has to be received at any special position, that any special quality or quantify of signals are required, or that there are any other special requirements.

One skilled in the art would not build an expensive and bulky structure such as a tower if there was not a special requirement to receive a special elevated quantity or quality of signals. It is difficult to obtain permits to build communication towers, permits may not always be available, generally an area for a tower is leased or some other fee is paid, the tower itself is expensive to build and operate, and a company must comply with many other ordinances and laws to build and operate such a tower. As Appellant pointed out, companies are always trying to save money and would not build a tower unless required. "A critical step in analyzing the patentability of claims pursuant to section 103(a) is casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." *In re Kotzab*, 217 F.3d at ___, 55 USPQ2d at 1316.

These are all evidence and secondary considerations why one skilled in the art would NOT build a tower. The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors. The Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references, and the Examiner imported special requirements into the cited references in an attempt to further modify the teachings in the references to meet the claimed limitations. One skilled in the art would not modify the cited references as stated by the Examiner without that special requirement.

Neither Appellants claims nor any cited reference teaches or suggests that a special quantity or any quantity of signals is required or received. Appellant's claims only require one GPS signal to be received. It is not relevant to Appellant's claims or to any cited reference whether one or multiple GPS signals are received or whether a GPS signal is received at any particular position, such as position 1 or position 2, or from any one or more of the GPS satellites.

5. The Proposed Combination and Modification Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

(a) "Tower" Limitations

It is meaningless to say that Bickley would be modified to include a tower. Bickley is a portable hand-held position locating radio. There is no tower, and there is no reason to have a tower. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose.

It is equally meaningless to say Talbot would move a GPS receiver to the top of a tower for any reason. Talbot does not teach a tower. Talbot discloses a distance measurement instrument for a telescope. Adding a tower to Talbot would not only serve no purpose, it might disable the servo-function of the telescope.

It is meaningless to say Csapo would move its PMU (mobile unit) to the top of a tower, as claimed by the Examiner in the Fourth Office action at page 12, lines 4-8. Csapo would not work. Csapo would then have both the PRU (radio unit) and the PMU co-located. There would be no main unit and no separate radio unit, which is explicitly taught in Csapo. See Figure 9. Csapo would no longer be able to have multiple PRUs and one PMU as taught by Figure 11.

The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

6. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary

considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

7. Summary of Advisory Action Issues/Application to Method Claims

As stated above, the Examiner did not compare the specific method claim limitations to the references in the rejection. Therefore, they were not addressed and a *prima facie* case of obviousness was not made. While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently, 10) all of the foregoing combinations and modifications and inherently disclosed limitations can be combined with Talbot without a suggestion to combine all three of the references and without a suggestion to make all of the modifications, and 11) for claim limitations identifying a portion of

a tower, the Examiner can modify all of the foregoing without a reason to modify and in opposition to all evidence and the Declaration presented by Appellant. Appellant submits that the foregoing 1-11 items are not plausible, and a *prima facie* case of obviousness has not been made by the Examiner.

8. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) receiving a global positioning system signal at approximately the upper portion of the communication tower and using the global positioning system signal to generate a global positioning system based stable timing signal; b) receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal; or c) converting the receiving frequency of communication signal to a stable lower frequency using the stabilized local oscillator signal. No combination of cited references discloses, teaches, or suggests the limitations as to a location of the claimed components on the tower.

Claims 1, 4, 5

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stable timing signal, to convert the lower frequency signal to an optical signal, and to transmit the optical signal" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "a stabilizing system configured to generate a stable timing signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, and 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

In the Advisory Action at page 3, line 17, the examiner found that "an antenna" was disclosed in Figure 9, reference 120. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "an antenna configured to receive the communication signal at a frequency" was disclosed in Figure 9, reference 120. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo, 2) the mis-quoted portion of Csapo can be modified for another teaching without restriction even though the issue was not addressed by the Examiner, 3) the "frequency synthesizer" of Bickley discloses, and is the same as, the claimed limitations without any evidence from the Examiner, 4) Bickley can be combined with Csapo without a suggestion to combine, 5) the combined Csapo and Bickley system can be modified without a reason to modify, 6) the modified combined Csapo and Bickley system can again be modified without a reason to modify, 7) the twice modified combined Csapo and Bickley system can be modified a third time

without a reason to modify, and 8) the three-times modified combined Csapo and Bickley system can be combined with knowledge generally available to one skilled in the art, which knowledge was not documented by the Examiner and for which no reasoned analysis was provided, and 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find this limitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

It is not inherent in Csapo that "a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stable timing signal, to convert the lower frequency signal to an optical signal, and to transmit the optical signal." The Examiner did not identify any portion of Csapo that inherently teaches converting from the frequency to a stable lower frequency using the stable timing signal and to convert the lower frequency signal to an optical signal.

3. No Reason to Combine and Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion for combining all three references and modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stable timing signal, to convert the lower frequency signal to an optical signal, and to transmit the optical signal.

Claim 2

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of a stabilizing system comprising "a timing source configured to generate the stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for a stabilizing system comprising "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim 2. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading

All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not establish that the claimed stabilizing system was inherently disclosed in Csapo. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

The Examiner has not established that Csapo inherently discloses a stabilizing system comprising "a timing source configured to generate the stable timing signal" and "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal."

3. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source configured to generate the stable timing signal or b) a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal.

Claim 3/9

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a block converter configured to use a stabilized oscillator signal to convert the frequency of the signal to the stable lower frequency" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about the inherency of the block converter limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The entire "block converter" limitation is not inherently disclosed in Csapo. The limitation requires "a block converter configured to use a stabilized oscillator signal to convert the frequency of the signal to the stable lower frequency." This limitation requires using a stabilized local oscillator signal to convert the communication signal from the frequency to a stable lower frequency. Csapo does not teach or suggest using a stabilized local oscillator signal for anything. The Examiner admitted as such in the Advisory Action at page 4, lines 20-21.

Therefore, this "block converter" claim limitation cannot possibly be inherently disclosed in Csapo.

It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter claim limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about how the entire "block converter" limitation is inherently disclosed in Csapo. The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a block converter configured to use a stabilized oscillator signal to convert the frequency of the signal to the stable lower frequency.

Claim 6/10/25/39/43

1. No Reason to Combine and Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests that the stable timing signal comprises a global positioning system timing signal.

Claim 8

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of a stabilizing system comprising "a timing source configured to generate the stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for a stabilizing system comprising "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim 2. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

In the Advisory Action on page 4, lines 9-11, the examiner found that "a converting system configured to convert a communication signal from to a lower frequency signal, and to convert the lower frequency signal to an optical signal, and to transmit the optical signal to an optical receiving system" is inherently disclosed by Csapo at column 4, lines 43-50 and column 6, lines 55-59. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal" was inherently disclosed at column 4, lines 43-50 and column 6, lines 55-59.

The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not establish that the claimed stabilizing system was inherently disclosed in Csapo. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

The Examiner has not established that Csapo inherently discloses a stabilizing system comprising "a timing source configured to generate the stable timing signal" and "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal."

Csapo does not inherently disclose "a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal." The Examiner did not identify any portion of Csapo that inherently teaches a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal.

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source configured to generate the stable timing signal or b) a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal or c) a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal.

Claims 14-16, 17-22, 23, 28, 31, 33, 34

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of a stabilizing system comprising "a timing source configured to generate the stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for a stabilizing system comprising "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim 2. (See Summary of Advisory Action

Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

In the Advisory Action on page 4, lines 9-11, the examiner found that "a converting system configured to convert a communication signal from to a lower frequency signal, and to convert the lower frequency signal to an optical signal, and to transmit the optical signal to an optical receiving system" is inherently disclosed by Csapo at column 4, lines 43-50 and column 6, lines 55-59. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal" was inherently disclosed at column 4, lines 43-50 and column 6, lines 55-59. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

In the Advisory Action at page 3, line 18, the Examiner found that "a block converter" is inherently disclosed at column 4, lines 43-50. See Advisory Action, page 3. However, the Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about the inherency of the block converter limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

In the Advisory Action at page 3, line 17, the examiner found that "an antenna" was disclosed in Figure 9, reference 120. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "an antenna configured

to receive the communication signal at a frequency" was disclosed in Figure 9, reference 120. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not establish that the claimed stabilizing system was inherently

disclosed in Csapo. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

The Examiner has not established that Csapo inherently discloses a stabilizing system comprising "a timing source configured to generate the stable timing signal" and "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal."

The entire "block converter" limitation is not inherently disclosed in Csapo. The limitation requires "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal." This limitation requires using a stabilized local oscillator signal to convert the communication signal from the frequency to a stable lower frequency. Csapo does not teach or suggest using a stabilized local oscillator signal for anything. The Examiner admitted as such in the Advisory Action at page 4, lines 20-21. Therefore, this "block converter" claim limitation cannot possibly be inherently disclosed in Csapo.

It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter claim limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about how the entire "block converter" limitation is inherently disclosed in Csapo. The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly

disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source configured to generate the stable timing signal; b) a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal; c) a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency; or d) a fiber optic transmitter configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over fiber optic cable.

Claim 24

1. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests that the stable timing source comprises a global positioning system based timing source.

Claim 26

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

However, the Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation of "wherein the fiber optic transmitter is located approximately at an upper portion of a tower and the fiber optic receiver is located approximately at a base of the tower" was disclosed. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

In the Advisory Action, at page 4, lines 1-4, the Examiner stated that a fiber optic receiver and a fiber optic transmitter were inherently disclosed in Csapo at column 6, lines 55-59, wherein it is clear that in order to provide an optical signal, an optical/electrical conversion and an optic transmitter-receiver should be used.

The Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation of "wherein the fiber optic transmitter is located approximately at an upper portion of a tower and the fiber optic receiver is located approximately at a base of the tower" was inherently disclosed. Csapo does not inherently

disclose "wherein the fiber optic transmitter is located approximately at an upper portion of a tower and the fiber optic receiver is located approximately at a base of the tower." The Examiner did not identify any portion of Csapo that inherently teaches a fiber optic transmitter located approximately at an upper portion of a tower and a fiber optic receiver is located approximately at a base of the tower.

The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the fiber optic transmitter is located approximately at an upper portion of a tower and the fiber optic receiver is located approximately at a base of the tower.

Claim 27

1. No Valid Reason to Modify The Combined Three References Has Been Provided and None Exists

The Examiner did not provide a valid suggestion for combining all three references and modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. Upper Portion of Tower: Inventor's Declaration and Evidence Demonstrate the Examiner's Proposed Modification is Erroneous

The Examiner's purported reason to modify the references to reach the limitations in this claim, namely to reduce the blockage of GPS satellite signals caused by high or tall buildings, is meaningless. One skilled in the art would not modify those references to add a tower. See Declaration of Inventors, attached hereto as Exhibit A. The Examiner's reason to modify Csapo to meet the claimed limitations is refuted by the evidence herein. The Examiner disregarded Appellant's Declaration.

The Examiner imported special requirements into the cited references that there must be some special requirement to receive an elevated quantity or quality of signals. No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. Neither any cited references nor Appellant's claimed invention discuss any need for a special elevated quantity or quality of signals. The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal.

These are all evidence and secondary considerations why one skilled in the art would NOT build a tower. The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors, and the Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references. Further, the Examiner imported special requirements into the references and Appellant's claims that there must be some elevated quantity or quality of signals. The Examiner erred in importing special requirements into the cited references and modifying the cited references. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the stable timing source is located approximately at an upper portion of a tower.

Claim 29

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation of "wherein the stable timing signal comprises approximately a ten megahertz global positioning system timing pulse" was disclosed. The Examiner disregarded the entire limitation and only provided a generic rejection.

2. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed

limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the stable timing signal comprises approximately a ten megahertz global positioning system timing pulse. This claim is patentable for the same reasons

Claim 30

1. The Proposed Combination Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

It is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

Moreover, it is equally meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. It is a far stretch to say Talbot would be modified to add an entire infrastructure to transmit and receive MMDS signals, such as for a base station system. It would be an entirely different system.

The Examiner did not provide any proof that the system of Csapo can even be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant submits that the Examiner's stated reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations. At least, Appellant did not locate one. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the communication signal comprises a multipoint multichannel distribution service based communication signal.

Claim 32

1. The Proposed Combination Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

It is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

It is equally meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. It is a far stretch to say Talbot would be modified to add an entire infrastructure to transmit and receive MMDS signals, such as for a base station system. It would be an entirely different system.

The Examiner did not provide any proof that the system of Csapo can even be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant submits that the Examiner's stated reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations. At least, Appellant did not locate one.

The MMDS terminology limits the structure of the claimed invention. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d at 1257, 9 USPQ2d at 1966. The Examiner must find each and every claim limitation in the prior art to

uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. That includes the MMDS limitation. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the frequency of the communication signal comprises approximately between 2.15-2.17 gigahertz.

Claims 35, 36-38, 40

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of a stabilizing system comprising "a timing source configured to generate the stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for a stabilizing system comprising "a stabilized local oscillator

configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim 2. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

In the Advisory Action at page 3, line 18, the Examiner found that "a block converter" is inherently disclosed at column 4, lines 43-50. See Advisory Action, page 3. However, the Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about the inherency of the block converter limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

In the Advisory Action at page 3, line 17, the examiner found that "an antenna" was disclosed in Figure 9, reference 120. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "an antenna configured

to receive the communication signal at a frequency" was disclosed in Figure 9, reference 120. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not establish that the claimed stabilizing system was inherently

disclosed in Csapo. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

The Examiner has not established that Csapo inherently discloses a stabilizing system comprising "a timing source configured to generate the stable timing signal" and "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal."

The entire "block converter" limitation is not inherently disclosed in Csapo. The limitation requires "a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal." This limitation requires using a stabilized local oscillator signal to convert the communication signal from the frequency to a stable lower frequency. Csapo does not teach or suggest using a stabilized local oscillator signal for anything. The Examiner admitted as such in the Advisory Action at page 4, lines 20-21. Therefore, this "block converter" claim limitation cannot possibly be inherently disclosed in Csapo.

It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter claim limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about how the entire "block converter" limitation is inherently disclosed in Csapo. The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly

disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source configured to generate the stable timing signal; b) a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal; c) a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency; or d) a fiber optic transmitter configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over fiber optic cable.

Claim 41

1. The Proposed Combination Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

It also is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals. The Examiner's proposed

modification would make the Bickley system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

Talbot discloses a distance measurement instrument for a telescope. Talbot does not teach a tower. Talbot does not speak of buildings or any need to reduce or eliminate blockage of any signals whatsoever. It is unlikely that one skilled in the art of Talbot-type telescopes would locate such a telescope in the midst of tall buildings where the user could not use the telescope.

It is meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. It is a far stretch to say Talbot would be modified to add an entire infrastructure to transmit and receive MMDS signals, such as for a base station system. It would be an entirely different system.

The Examiner did not provide any proof that the system of Csapo can even be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant submits that the Examiner's stated reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the

rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide, at all, a reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations. At least, Appellant did not locate one.

The Examiner stated that because the MMDS is only recited in the preamble, it is given very little patentable weight. Advisory Action, page 9, lines 10-11. A claim preamble may include a limitation where the preamble is used to define the subject matter of the claimed invention. *NTP, Inc. v. Research in Motion, Ltd.*, 392 F.3d at ___, 73 USPQ2d at 1247; *Bell Communications Research, Inc. v. Vitalink Communications Corp.*, 55 F.3d at ___, 34 USPQ2d at 1821. The MMDS terminology limits the structure of the claimed invention. Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d at 1257, 9 USPQ2d at 1966. The Examiner must find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. That includes the MMDS limitation. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same

or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading Claim 68 and has the same sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

5. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) receiving a multipoint multichannel distribution service based communication signal; b) an antenna at a communication tower configured to receive the communication signal; c) a fiber optic transmitter configured to convert the communication signal to an optical signal and to transmit the optical signal over fiber optic cable; and d) a fiber optic receiver configured to receive the optical signal over the fiber optic cable.

Claims 42, 44

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of a stabilizing system comprising "a timing source configured to generate the stable timing signal" was disclosed at Figure 13, reference 140. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for a stabilizing system comprising "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on this limitation. For this specific limitation, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim 2. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

In the Advisory Action at page 3, line 18, the Examiner found that "a block converter" is inherently disclosed at column 4, lines 43-50. See Advisory Action, page 3. However, the Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency before the communication signal is converted to the optical signal" was inherently disclosed at column 4, lines 43-50. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about the inherency of the block converter limitation. The Examiner never found that the entire limitation is inherently taught in Csapo. The Examiner never addressed each portion of the limitation.

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious.

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that a "stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. Appellant believes it is a far stretch for the Examiner to make this claim. Csapo does not state what is meant by "calibrating." Csapo does not state that the GPS signals are used as a stable timing signal. Csapo does not state that the GPS signals are used to stabilize an oscillator. Csapo does not state that any type of stabilizing signal, whether it be a GPS signal or otherwise, is used in any type of block converter.

Moreover, as explained above, to even reach the point in the Advisory Action at which the Examiner found a "stabilizing system" to be inherent, the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not establish that the claimed stabilizing system was inherently disclosed in Csapo. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

The Examiner has not established that Csapo inherently discloses a stabilizing system comprising "a timing source configured to generate the stable timing signal" and "a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal."

The entire "block converter" limitation is not inherently disclosed in Csapo. The limitation requires "a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency before the communication signal is converted to the optical signal." This limitation requires using a stabilized local oscillator signal to convert the communication signal from the frequency to a stable lower frequency before the communication signal is converted to an optical signal. Csapo does not teach or suggest using a stabilized local oscillator signal for anything. The Examiner admitted as such in the Advisory Action at page 4, lines 20-21. Therefore, this "block converter" claim limitation cannot possibly be inherently disclosed in Csapo.

It is further noted that the Examiner stated in the Advisory Action on page 5, line 5, that the block converter claim limitation is "inherently disclosed by Csapo as explained above." The Examiner did not provide any further discussion about how the entire "block converter" limitation is inherently disclosed in Csapo. The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Valid Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a valid suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and

Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) a timing source configured to generate the stable timing signal; b) a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal; or c) a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency before the communication signal is converted to the optical signal.

Claims 45-50, 54, 56

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not compare the method claim limitations to any cited references.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "generating a stable timing signal" was disclosed. The Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "using the stable timing signal as an input to a local oscillator to

generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. While this does not read on the above method claim limitation, it does provide evidence that the above method claim limitation is not found in the cited references.

For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim. (See Summary of Advisory Action Issues under the sub-heading All Claims and Claim 68. The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious. The Examiner never found that each portion of the was found in the cited references for "using the stable timing signal as an input to a local oscillator to generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency."

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive

matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that providing "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. The Examiner stated that a block converter was inherently disclosed in Csapo at column 4, lines 43-50. See Advisory Action, page 3, line 18.

The Examiner did not actually compare the claim limitations of the method claims to the references. The Examiner did not compare the claim limitation "using the stable timing signal as an input to a local oscillator to generate a stabilized oscillator signal" to any inherency rejection. The Examiner did not compare "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency" to any inherency rejection. Also, the Examiner did not compare the claim limitation "converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable" to any inherency rejection. He merely stated that a "stabilizing system" and a "block converter" are inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitations are inherently disclosed. Since the above limitations were not found to be inherently or explicitly disclosed, the Examiner did not make a *prima facie* case of obviousness.

While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch. See Items 1-9 of the Summary of

All Claims, which apply to this claim. (See Summary of Advisory Action Issues under the sub-heading All Claims and Claim 68. The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed. Further, the Examiner did not find that the claimed method limitations were inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Csapo does not inherently disclose "using the stable timing signal as an input to a local oscillator to generate a stabilized oscillator signal," "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency," or "converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable." The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Valid Suggestion to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a valid suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same

or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) using the stable timing signal as an input to a local oscillator to generate a stabilized oscillator signal; b) using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency; and c) converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable.

Claim 51/61/65

1. The Examiner Did Not Consider Each Reference as a Whole and Bickley and Talbot Are Not Properly Combinable with Csapo

A reference must be considered as a whole. *In re Keller*, F.2d at 425, 208 USPQ at 881. The Examiner did not consider the context of the teachings of the entire cited references, broke the invention into component parts, and attempted to combine and modify those teachings, all without a suggestion to combine all three references and without a suggestion to modify the combination using hindsight reasoning in violation of *In re Keller, In re Kotzab,* and *Ruiz*. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under

the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests that the stable timing signal comprises a global positioning system based timing signal.

Claim 52

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not identify each portion of each limitation of each claim in his rejection in the Fourth Office action or in the Advisory Action.

The Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation of "wherein the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received approximately at a base of the tower" was disclosed. The Examiner disregarded the remaining portion of the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

In the Advisory Action, at page 4, lines 1-4, the Examiner stated that a fiber optic receiver and a fiber optic transmitter were inherently disclosed in Csapo at column 6, lines 55-59, wherein it is clear that in order to provide an optical signal, an optical/electrical conversion and an optic transmitter-receiver should be used.

However, the Examiner did not compare the entire claim limitations to the inherency rejection. The examiner did not find that the claimed limitation of "wherein the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received

approximately at a base of the tower" was inherently disclosed. Csapo does not inherently disclose "wherein the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received approximately at a base of the tower." The Examiner did not identify any portion of Csapo that inherently teaches the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received approximately at a base of the tower.

The Examiner never addressed each portion of the limitation and never found that the entire limitation is inherently taught in Csapo. The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Suggestion to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received approximately at a base of the tower.

Claim 53

1. No Valid Reason to Modify The Combined Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion for combining all three references and modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. Upper Portion of Tower: Inventor's Declaration and Evidence Demonstrate the Examiner's Proposed Modification is Erroneous

The Examiner's purported reason to modify the references to reach the limitations in this claim, namely to reduce the blockage of GPS satellite signals caused by high or tall buildings, is meaningless. One skilled in the art would not modify those references to add a tower. See Declaration of Inventors, attached hereto as Exhibit A. The Examiner's reason to modify Csapo to meet the claimed limitations is refuted by the evidence herein. The Examiner disregarded Appellant's Declaration.

The Examiner imported special requirements into the cited references that there must be some special requirement to receive an elevated quantity or quality of signals. No cited reference discusses the existence of buildings or blockage of any type of signals, whether GPS signals or otherwise. Neither any cited references nor Appellant's claimed invention discuss any need for a special elevated quantity or quality of signals. The Examiner admitted that the GPS signal is received at position 1 and position 2. See Advisory Action, Figure on page 2 and page 2, lines 8-11. All that is required from Appellant's claims is to receive one GPS signal.

These are all evidence and secondary considerations why one skilled in the art would NOT build a tower. The Examiner ignored the fact that GPS signals are received even where tall buildings exist, as explained in the Declaration by the inventors, and the Examiner ignored all evidence demonstrating why one skilled in the art would actually not modify the cited references. Further, the Examiner imported special requirements into the references and Appellant's claims that there must be some elevated quantity or quality of signals. The Examiner erred in importing special requirements into the cited references and modifying the cited references. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the stable timing signal is transmitted approximately at an upper portion of a tower.

Claim 55

1. The Proposed Combination Would Render the Cited Art Unsatisfactory for Its Intended Purpose

If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification, and the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127; *In re Ratti*, 270 F.2d at 813, 123 USPQ at 352. Any attempt to combine the teachings of one reference with that of another in such a manner as to render the invention of the first reference inoperative is not permissible. *See, e.g. Ex parte Hartmann*, 186 USPQ at 367; *Ex parte Sternau*, 155 USPQ at 735.

It is meaningless to say that Bickley would be modified to transmit MMDS signals. Bickley transmits and receives GPS signals so that a person can identify the person's location. Bickley processes other audio signals with a crypto unit for transmission or reception. There is no structure for transmitting and receiving MMDS signals. The Examiner's proposed modification would make the Bickley system unusable for its intended purpose. The proposed modification cannot render the prior art unsatisfactory for its intended purpose. *In re Gordon*, 733 F.2d at ___, 221 USPQ at 1127.

Moreover, it is equally meaningless to state the telescope distance measurement instrument of Talbot could somehow be modified to transmit and receive MMDS communications. Talbot only transmits and receives GPS signals for the purpose of distance measurement. It is a far stretch to say Talbot would be modified to add an entire infrastructure to transmit and receive MMDS signals, such as for a base station system. It would be an entirely different system.

The Examiner did not provide any proof that the system of Csapo can even be modified to support MMDS communications. The Examiner ignored the issue that protocols identified in Csapo may be incompatible with MMDS systems and did not address it. Csapo teaches CDMA, TDMA, GSM, and analog. These are all protocols. TDMA is used in GSM systems, and CDMA is used in digital cellular systems. MMDS is not used along with any of these protocols. GSM and digital cellular are not line-of-sight technologies. There is no evidence to suggest the Csapo system would work with the MMDS protocol. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

2. MMDS is a Limitation and is Not Taught in Or Obvious From the References

Appellant submits that the Examiner's stated reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitations is not sufficient to meet the requirements of *Oetiker, In re Lee, In re Fine,* and *In re Kotzab*, as stated above, or any other Federal Circuit or Board decision. The Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references and to modify those references. *In re Fine*, 837 F.2d at ___, 5 USPQ2d at 1598.

Appellant further notes that the Examiner did not make or maintain any rejections under 35 U.S.C. 103 based purely on Csapo. Thus, the Examiner's statement must be applied to the rejection based upon the combination of Csapo, Bickley, and Talbot. The Examiner did not provide a valid reason to modify the combination of Csapo, Bickley, and Talbot to reach the MMDS claim limitation for this claim. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. Secondary Considerations Demonstrate the Claimed Invention is Allowable

Secondary considerations demonstrate that the claimed invention is not obvious over the cited references alone or in combination. Under *Stratoflex and Hybritech*, evidence or secondary considerations are relevant to the issue of obviousness and must be considered in every case in which they are present. (The complete argument is discussed under the heading Claim 68 and has the same sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests wherein the communication signal comprises a multipoint multichannel distribution service based communication signal.

Claims 57, 59, 60, 62

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not compare the method claim limitations to any cited references.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "generating a stable timing signal" was disclosed. The Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower

frequency." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. While this does not read on the above method claim limitation, it does provide evidence that the above method claim limitation is not found in the cited references.

For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious. The Examiner never found that each portion of the was found in the cited references for "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency."

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that providing "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. The Examiner stated that a block converter was inherently disclosed in Csapo at column 4, lines 43-50. See Advisory Action, page 3, line 18.

The Examiner did not actually compare the claim limitations of the method claims to the references. The Examiner did not compare the claim limitation "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" to any inherency rejection. The Examiner did not compare "using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency" to any inherency rejection. He merely stated that a "stabilizing system" and a "block converter" are inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitations are inherently disclosed. Since the above limitations were not found to be inherently or explicitly disclosed, the Examiner did not make a *prima facie* case of obviousness.

While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed.

In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Csapo does not inherently disclose "generating a stable timing signal," "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal," or "using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency," The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson.*

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) generating a stable timing signal; b) receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal; and c) using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency.

Claim 58

1. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

Csapo does not inherently disclose "converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable." The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

2. No Reason to Further Modify All Three References Has Been Provided At All and None Exists

The Examiner did not provide a suggestion, at all, for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

3. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable.

Claims 64, 66

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not compare the method claim limitations to any cited references.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "generating a stable timing signal" was disclosed. The Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. While this does not read on the above method claim limitation, it does provide evidence that the above method claim limitation is not found in the cited references.

For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim. (See Summary of Advisory

Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious. The Examiner never found that each portion of the was found in the cited references for "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" or "using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency."

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that providing "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. The Examiner stated that a block converter was inherently disclosed in Csapo at column 4, lines 43-50. See Advisory Action, page 3, line 18.

The Examiner did not actually compare the claim limitations of the method claims to the references. The Examiner did not compare the claim limitation "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal" to any inherency rejection. The Examiner did not compare "using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency" to any inherency rejection. He merely stated that a "stabilizing system" and a "block converter" are inherently disclosed. In order to make a claim of inherency, the Examiner must

find that the claimed limitations are inherently disclosed. Since the above limitations were not found to be inherently or explicitly disclosed, the Examiner did not make a *prima facie* case of obviousness.

While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch. (The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Csapo does not inherently disclose "generating a stable timing signal," "receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal," or "using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency," The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson.*

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) generating a stable timing signal; b) receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal; and c) using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency.

Claim 67

1. Each Limitation Was Not Fully Identified in the Rejection

The Examiner did not identify each portion of each limitation in his rejection. The Examiner is required to find each and every claim limitation in the prior art to uphold a rejection. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489. The Examiner did not compare the method claim limitations to any cited references.

In the Advisory Action at page 4, line 16, the examiner found that "a timing source" is disclosed at Figure 13, reference 140. The Examiner did not identify each portion of the limitation in the rejection and did not find that the complete limitation of "generating a stable

timing signal" was disclosed. The Examiner disregarded the limitation. Specifically, the Examiner did not identify the underlined portion of the limitation. Additionally, a single reference to a single rectangular box with a single label on a figure, and no reference to a text citation in the reference, could not possibly teach the entire limitation and each portion of the limitation.

Appellant contends that the Examiner also did not completely identify each portion of the limitation in the rejection for "converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal." In the Advisory Action at page 4, lines 20-21, the Examiner stated that Csapo was silent on a stabilizing system comprising a stable timing signal and a stabilized local oscillator. While this does not read on the above method claim limitation, it does provide evidence that the above method claim limitation is not found in the cited references.

For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. See Items 1-9 of the Summary of All Claims, which apply to this claim. (See Summary of Advisory Action Issues under the sub-heading All Claims. The complete argument is discussed under the heading All Claims and Claim 68 and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

The Examiner never referenced the entire limitation. The Examiner did not identify each portion of this limitation in the rejection and did not find that the complete limitation was disclosed or obvious. The Examiner never found that each portion of the was found in the cited references for "converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal."

Because the Examiner did not find each complete limitation in the cited references, the Examiner did not establish a *prima facie* case of obviousness. *In re Crish*, 393 F.3d at ___, 73 USPQ2d at 1366; Golight Inc. v. Wal-Mart Stores, Inc., 355 F.3d at ___, 69 USPQ2d at 1489.

2. The Examiner Did Not Establish Inherency

The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

The Examiner found that providing "a stabilizing system" is inherently disclosed in Csapo "in that the GPS signal is used to provide a 'stable' timing signal to calibrate the VCO of the synthesizer." See Advisory Action, page 5, line 21-page 6, line 2. The Examiner stated that a block converter was inherently disclosed in Csapo at column 4, lines 43-50. See Advisory Action, page 3, line 18.

The Examiner did not actually compare the claim limitations of the method claims to the references. The Examiner did not compare the claim limitation "converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal" to any inherency rejection. He merely stated that a "stabilizing system" and a "block converter" are inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitations are inherently disclosed. Since the above limitations were not found to be inherently or explicitly disclosed, the Examiner did not make a *prima facie* case of obviousness.

While the discussions from the Examiner of the "stabilizing system" and the "block converter" of the system claims are not definitive to these method claim limitations, they do provide evidence that the method claim limitations are not found in the cited references. For the specific stabilizing system/stabile timing signal/stabilized local oscillator issue, the Examiner found that a "stabilizing system" and a "block converter" were inherent, and the Examiner had to find all of the following: 1) the entire block converter claim limitation is inherently disclosed in Csapo even though the entire limitation was not addressed by the Examiner and cannot possibly be inherently disclosed in Csapo . . . 9) a stabilizing system is inherently disclosed in Csapo and any inherently disclosed stabilizing system reads on the claimed limitations because the Examiner did not find the claimed stabilizing system was inherently disclosed, even though the Examiner admits Csapo does not disclose a stable timing signal explicitly or inherently. To find

the claimed stabilizing system imitation inherently disclosed, one must find that all of items 1-9 must necessarily be present in the reference. This is a stretch.

Further, the Examiner only found that a stabilizing system was inherently disclosed in Csapo. The Examiner did not find that the claimed stabilizing system was inherently disclosed. In order to make a claim of inherency, the Examiner must find that the claimed limitation is inherently disclosed.

Csapo does not inherently disclose "generating a stable timing signal" or "converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal." The Examiner did not provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art as required by *Ex parte Levy* and that the missing descriptive matter is necessarily present in the thing described in the reference as required by *In re Robertson*.

3. No Reason to Combine and Further Modify All Three References Has Been Provided and None Exists

The Examiner did not provide a suggestion to combine all three references and did not provide a suggestion for further modifying the combined references multiple times to reach the claimed limitation. The Examiner combined disclosure of a base station in Csapo, a citation from a telescope distance measurement instrument, and a citation from a portable hand-held position locating radio, found a series of technical aspects to be found inherently disclosed in the references, and modified all of that to reach the claimed limitations in a manner explicitly disavowed in *Ruiz*. There is no suggestion in this citation to combine Talbot with Bickley and Csapo and to then modify that combination to arrive at the claimed invention. The Examiner did not make a *prima facie* case of obviousness, and the combinations of the three references, the findings of inherency, and the modifications of the combined and inherently found systems is improper. (The complete argument is discussed under the heading All Claims and has the same or similar sub-heading title, applies fully to this claim, and should be considered fully set forth under this claim.)

4. No Combination of References Teaches the Claimed Invention

No combination of cited references discloses, teaches, or suggests a) generating a stable timing signal; b) converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal; and c) converting the intermediate frequency signal to an optical signal and transmitting the optical signal over fiber optic cable.

VIII. Claims Appendix

1. (Previously Presented) A system for receiving a communication signal comprising:

an antenna at a communication tower configured to receive the communication signal at a frequency;

a stabilizing system configured to generate a stable timing signal;

a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stable timing signal, to convert the lower frequency signal to an optical signal, and to transmit the optical signal; and

an optical receiving system configured to receive the optical signal.

2. (Original) The system of claim 1 wherein the stabilizing system comprises:

a timing source configured to generate the stable timing signal; and

a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal.

3. (Original) The system of claim 1 wherein the converting system comprises:

a block converter configured to use a stabilized oscillator signal to convert the frequency of the signal to the stable lower frequency.

4. (Original) The system of claim 1 wherein the converting system comprises:

a fiber optic transmitter configured to convert the lower frequency signal to an optical signal and to transmit the optical signal over fiber optic cable.

5. (Original) The system of claim 1 wherein the receiving system comprises:

a fiber optic receiver configured to receive the optical signal over fiber optic cable.

6. (Original) The system of claim 1 wherein the stable timing signal comprises a global positioning system timing signal.

7. (Cancelled)

8. (Previously Presented) A system for receiving a communication signal comprising:

an antenna configured to receive the communication signal at a frequency;

a stabilizing system configured to generate a stable timing signal, the stabilizing system comprising:

a timing source configured to generate the stable timing signal; and

a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal; and

a converting system configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized oscillator signal.

9. (Original) The system of claim 8 wherein the converting system comprises:

a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to the stable lower frequency.

10. (Previously Presented) The system of claim 9 wherein the stable timing signal comprises a global positioning system timing signal.

11. (Previously Presented) A system for receiving a multipoint multichannel distribution service based communication signal at a tower having an upper portion and a lower portion, the system comprising:

fiber optic cable extending from approximately the upper portion of the tower to at least approximately the lower portion of the tower;

an antenna configured to receive the communication signal at a frequency;

a timing source located at approximately the upper portion of the tower and configured to receive a stable timing source signal and to transmit a stable timing source based stable timing signal;

a stabilized local oscillator located at approximately the upper portion of the tower configured to receive the stable timing source based stable timing signal and to use the stable timing source based stable timing signal as an input to generate a stabilized oscillator signal;

a block converter configured to convert the communication signal from the frequency to a stable lower frequency using the stabilized local oscillator signal;

an optical converting system located at approximately the upper portion of the tower and configured to convert the lower frequency communication signal to an optical

signal and to transmit the optical signal over the fiber optic cable from approximately the upper portion of the tower; and

an optical receiving system configured to receive the optical signal over the fiber optic cable.

12. (Original) The system of claim 11 wherein the converting system comprises:

a fiber optic transmitter configured to convert the communication signal to the optical signal and to transmit the optical signal over the fiber optic cable.

13. (Original) The system of claim 11 wherein the receiving system comprises:

a fiber optic receiver configured to receive the optical signal over the fiber optic cable.

14. (Previously Presented) A system for receiving a communication signal having a frequency comprising:

a timing source configured to generate a stable timing signal;

a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal;

an antenna at a communication tower configured to receive the communication signal;

a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency;

a fiber optic transmitter configured to convert the lower frequency communication signal to an optical signal and to transmit the optical signal over fiber optic cable; and

a fiber optic receiver configured to receive the optical signal over the fiber optic cable.

15. (Original) The system of claim 14 further comprising a filter configured to filter at least one member of a group comprising emissions and another communication signal.

16. (Original) The system of claim 14 further comprising an amplifier configured to amplify the communication signal.

17. (Original) The system of claim 14 further comprising an electrical converter configured to convert the optical signal to an electrical signal.

18. (Original) The system of claim 14 further comprising an inserter configured to insert the stable timing signal on a transmission medium configured to carry the stable timing signal to the stabilized local oscillator.

19. (Original) The system of claim 14 further comprising a transformer configured to transform power from a first level to a second level.

20. (Original) The system of claim 19 further comprising an inserter configured to receive power at the second level from the transformer and to insert the power on a transmission medium.

21. (Original) The system of claim 14 further comprising a distributor configured to receive power over a transmission medium and to distribute the power to at least one member of a group comprising the block converter, the fiber optic transmitter, and the stabilized local oscillator.

22. (Original) The system of claim 14 further comprising an external receiver configured to receive external timing signals from an external timing source and to generate the external timing signals to the timing source.

23. (Original) The system of claim 14 further comprising a suppressor configured to suppress electrical interference for the system.

24. (Previously Presented) The system of claim 14 wherein the stable timing source comprises a global positioning system based timing source.

25. (Previously Presented) The system of claim 14 wherein the stable timing signal comprises a global positioning system based timing signal.

26. (Original) The system of claim 14 wherein the fiber optic transmitter is located approximately at an upper portion of a tower and the fiber optic receiver is located approximately at a base of the tower.

27. (Original) The system of claim 14 wherein the stable timing source is located approximately at an upper portion of a tower.

28. (Original) The system of claim 14 wherein the stable timing source is located approximately at a base of a tower.

29. (Original) The system of claim 14 wherein the stable timing signal comprises approximately a ten megahertz global positioning system timing pulse.

30. (Original) The system of claim 14 wherein the communication signal comprises a multipoint multichannel distribution service based communication signal.

31. (Original) The system of claim 14 wherein the frequency of the communication signal comprises a high frequency and the stable lower frequency comprises an intermediate frequency.

32. (Original) The system of claim 14 wherein the frequency of the communication signal comprises approximately between 2.15-2.17 gigahertz.

33. (Original) The system of claim 14 further comprising:

a redundant block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to another stable lower frequency;

a redundant fiber optic transmitter configured to convert the other lower frequency communication signal to another optical signal and to transmit the other optical signal over another fiber optic cable; and

a redundant fiber optic receiver configured to receive the other optical signal over the other fiber optic cable.

34. (Original) The system of claim 33 further comprising a selector configured to select for receiving the optical signal or the other optical signal.

35. (Previously Presented) A system for receiving a communication signal having a frequency comprising:

a timing source configured to generate a stable timing signal;

a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal;

an antenna configured to receive the communication signal at a communication tower; and

a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable intermediate frequency.

36. (Original) The system of claim 35 further comprising a fiber optic transmitter configured to convert the intermediate frequency communication signal to an optical signal and to transmit the optical signal over fiber optic cable.

37. (Original) The system of claim 36 further comprising a fiber optic receiver configured to receive the optical signal over the fiber optic cable.

38. (Original) The system of claim 35 further comprising an amplifier configured to amplify the communication signal.

39. (Original) The system of claim 35 wherein the stable timing signal comprises a global positioning system based timing signal.

40. (Original) The system of claim 35 wherein the frequency of the communication signal comprises a high frequency.

41. (Previously Presented) A system for receiving a multipoint multichannel distribution service based communication signal having a frequency comprising:

an antenna at a communication tower configured to receive the communication signal;

a fiber optic transmitter configured to convert the communication signal to an optical signal and to transmit the optical signal over fiber optic cable; and

a fiber optic receiver configured to receive the optical signal over the fiber optic cable.

42. (Original) The system of claim 41 further comprising:

a timing source configured to generate a stable timing signal;

a stabilized local oscillator configured to receive the stable timing signal and to use the stable timing signal as an input to generate a stabilized oscillator signal; and

a block converter configured to use the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency before the communication signal is converted to the optical signal.

43. (Original) The system of claim 42 wherein the stable timing signal comprises a global positioning based system timing signal.

44. (Original) The system of claim 42 further comprising an amplifier configured to amplify the communication signal.

45. (Previously Presented) A method for receiving a communication signal having a receiving frequency comprising:

generating a stable timing signal;

using the stable timing signal as an input to a local oscillator to generate a stabilized oscillator signal;

receiving the communication signal at a communication tower;

using the stabilized oscillator signal to convert the receiving frequency of the communication signal to a stable lower frequency;

converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable; and

receiving the optical signal over the fiber optic cable.

46. (Original) The method of claim 45 further comprising filtering at least one member of a group comprising emissions and another communication signal.

47. (Original) The method of claim 45 further comprising amplifying the communication signal.

48. (Original) The method of claim 45 further comprising converting the optical signal to an electrical signal after receiving the optical signal over the fiber optic cable.

49. (Original) The method of claim 45 further comprising inserting the stable timing signal on a transmission medium configured to carry the stable timing signal to a local oscillator.

50. (Original) The method of claim 45 further comprising receiving external timing signals from an external timing source and using the external timing signals to generate the stable timing signal.

51. (Original) The method of claim 45 wherein the stable timing signal comprises a global positioning system based timing signal.

52. (Original) The method of claim 45 wherein the optical signal is transmitted approximately from an upper portion of a tower and the optical signal is received approximately at a base of the tower.

53. (Original) The method of claim 45 wherein the stable timing signal is transmitted approximately at an upper portion of a tower.

54. (Original) The method of claim 45 wherein the stable timing signal is transmitted approximately at a base of a tower.

55. (Original) The method of claim 45 wherein the communication signal comprises a multipoint multichannel distribution service based communication signal.

56. (Original) The method of claim 45 wherein the receiving frequency of the signal comprises a high frequency and the lower frequency comprises an intermediate frequency.

57. (Previously Presented) A method for receiving a communication signal having a frequency comprising:

generating a stable timing signal;

receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal;

receiving the communication signal at a communication tower; and

using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency.

58. (Original) The method of claim 57 further comprising converting the lower frequency signal to an optical signal and transmitting the optical signal over fiber optic cable.

59. (Original) The method of claim 58 further comprising receiving the optical signal over the fiber optic cable.

60. (Original) The method of claim 57 further comprising amplifying the communication signal.

61. (Original) The method of claim 57 wherein the stable timing signal comprises a global positioning system timing signal.

62. (Original) The method of claim 57 wherein the frequency of the communication signal comprises a high frequency and the lower frequency comprises an intermediate frequency.

63. (Cancelled)

64. (Previously Presented) A method for receiving a multipoint multichannel distribution service based communication signal having a frequency comprising:

receiving the communication signal at a communication tower;

generating a stable timing signal;

receiving the stable timing signal at a local oscillator and using the stable timing signal as an input to generate a stabilized oscillator signal;

using the stabilized oscillator signal to convert the frequency of the communication signal to a stable lower frequency;

converting the communication signal to an optical signal;

transmitting the optical signal over fiber optic cable; and

receiving the optical signal over the fiber optic cable.

65. (Original) The method of claim 64 wherein the stable timing signal comprises a global positioning system based timing signal.

66. (Previously Presented) The method of claim 64 further comprising amplifying the communication signal.

67. (Previously Presented) A method for receiving a communication signal comprising:

receiving the signal at a receiving frequency at a communication tower;

generating a stable timing signal;

converting the receiving frequency of a communication signal to an intermediate frequency using the stable timing signal;

converting the intermediate frequency signal to an optical signal and transmitting the optical signal over fiber optic cable; and

receiving the optical signal over the fiber optic cable.

68. (Previously Presented) A method for receiving a communication signal comprising:

receiving the communication signal at a receiving frequency at approximately an upper portion of a communication tower;

receiving a global positioning system signal at approximately the upper portion of the communication tower and using the global positioning system signal to generate a global positioning system based stable timing signal;

receiving the global positioning system based stable timing signal at a stabilized local oscillator located at approximately the upper portion of the tower and using the global positioning system based stable timing signal as an input to generate a stabilized local oscillator signal; and

converting the receiving frequency of communication signal to a stable lower frequency using the stabilized local oscillator signal.

IX. Evidence Appendix

1. Declaration of Inventors filed with Response to Provoke Advisory Action, attached as Exhibit A hereto.

X. Related Proceedings Appendix

Appellant did not identify any court or Board proceedings in Section II (Related Appeals and Interferences) for which copies of decisions would be provided. Therefore, no copies are enclosed.

Respectfully Submitted,

LATHROP & GAGE L.C.

By 

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	Rausch et al.	Examiner	Nguyen, Duc M.
Serial No.	09/718,312	Group Art No.	2685
Filed	November 22, 2000	Confirmation No.	3505
For	System and Method for Processing a Signal		

Mail Stop AF
Commissioner For Patents
P.O. Box 1450Alexandria, VA 22313-1450

Declaration

We, Walter F. Rausch, Anthony A. Panella, Michael P. Denny, Harry W. Perlow, and Bryan H. Scott, declare as follows. If no signature is included herein for one or more of the named inventors in the previous sentence, see paragraph 7 of this Declaration.

1. We are named inventors for U.S. Patent Application No. 09/718,312, filed on November 22, 2000 (the "Application").

2. We have reviewed and understand the specification and claims in the Application. We have reviewed and understand the contents of the Office action dated November 30, 2004, and the references cited therein (the "Office action").

3. Global Positioning System (GPS) signals are generated from satellites that are orbiting the Earth. A GPS receiver receives GPS signals from one or more overhead satellites when the GPS receiver is in line-of-sight to the overhead satellite.

4. When the GPS receiver is in line-of-sight to the GPS satellite, a GPS receiver will receive a GPS signal even if buildings are around the GPS receiver. The GPS signal is not blocked by a surrounding building because the GPS signal is transmitted from an overhead satellite, not from a horizontally-based transmitter. A GPS receiver does not need to be placed on a tower or other structure to receive a GPS signal when buildings are around the GPS receiver. A GPS receiver does not need to be placed on a tower or other structure to reduce blockage of a GPS signal by a building, since the GPS signal is in line-of-sight to the GPS satellite.

5. For example, an intelligent transportation system (ITS) provides a GPS receiver in a vehicle to assist in GPS-based navigation, including route guidance, tracking, and emergency

EXHIBIT A

applications. The OnStar system is such a system. The GPS-based ITS navigation system operates in large cities with tall buildings and in rural areas. The ITS system uses GPS signals to track a vehicle through streets and other paths and to obtain directions for a driver through streets and other paths. The GPS receiver in the vehicle is not on a tower, and it receives GPS signals from the overhead GPS satellites. (Applicants are NOT alleging the ITS system is or is not within the art of the present Application. Applicants are merely using the ITS system as an example to demonstrate that a GPS receiver does not require a tower to receive a GPS signal when the GPS receiver is in an area that has buildings.)

6. The information in paragraphs 3-5 was known at the time of the invention claimed in the Application.

7. Fewer than all inventors may be making this Declaration if the remaining inventor(s) could not be located or reached before this Declaration was signed and/or filed or the remaining inventor(s) otherwise was/were not available to sign the declaration. Multiple attempts were made to locate, communicate with, or otherwise reach all named inventors prior to the signing and/or filing of this Declaration.

I/we hereby declare that all statements made herein of my/our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and such willful false statements may jeopardize the validity of the Application or any patent issued thereon.

Respectfully Submitted,

Date 1-31-05

By _____
Michael P. Denny

Respectfully Submitted,

Date _____

By _____
Harry W. Perlow

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Respectfully Submitted,

Date _____ By _____
Michael P. Denny

Respectfully Submitted,

Date January 31, 2005 By _____
Harry W. Perlow

Respectfully Submitted,

Date _____ By _____
Anthony A. Panella

Respectfully Submitted,

Date January 28 2005 By _____
Walter F. Rausch

Respectfully Submitted,

Date _____ By _____
Bryan H. Scott

Respectfully Submitted,

Date _____ By _____
Anthony A. Panella

Respectfully Submitted,

Date _____ By _____
Walter F. Rausch

Respectfully Submitted,

Date 1/29/05 By _____
Bryan H. Scott